

Methionyl-tRNA synthetase multiple sequence alignment

Note: Sequence abbreviations correspond to the first two letters of the genus and species name in the phylogeny shown in Figure 3 in Brown et al. Stpn2 and Baan2 are the putative drug resistant methionyl-tRNA synthetases. The mask (*) denotes those positions included in edited alignment used for phylogenetic analysis.

mrs_suppl_ER.msf MSF: 1362 Type: P February 27, 2003 16:55 Check: 3269

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Name: mask           Len: 1362 Check: 7778 Weight: 0.70
Name: stpn2          Len: 1362 Check: 2584 Weight: 1.10
Name: bace2           Len: 1362 Check: 1170 Weight: 0.60
Name: baan2           Len: 1362 Check: 8941 Weight: 0.60
Name: clpe2           Len: 1362 Check: 1991 Weight: 1.30
Name: deet            Len: 1362 Check: 6707 Weight: 1.20
Name: codi            Len: 1362 Check: 1617 Weight: 1.30
Name: thnw            Len: 1362 Check: 5144 Weight: 0.90
Name: thvo            Len: 1362 Check: 8406 Weight: 0.90
Name: pogi            Len: 1362 Check: 7789 Weight: 0.70
Name: bafr            Len: 1362 Check: 4727 Weight: 0.70
Name: cyhu            Len: 1362 Check: 7398 Weight: 0.90
Name: chte            Len: 1362 Check: 1411 Weight: 1.20
Name: chmu            Len: 1362 Check: 1611 Weight: 0.60
Name: chtr            Len: 1362 Check: 925 Weight: 0.60
Name: chpn            Len: 1362 Check: 815 Weight: 0.90
Name: fugu            Len: 1362 Check: 1692 Weight: 0.80
Name: hosa            Len: 1362 Check: 778 Weight: 0.80
Name: anga            Len: 1362 Check: 5345 Weight: 0.80
Name: drme            Len: 1362 Check: 143 Weight: 0.80
Name: sace            Len: 1362 Check: 8511 Weight: 1.10
Name: scpo            Len: 1362 Check: 62 Weight: 1.10
Name: didi            Len: 1362 Check: 2599 Weight: 1.00
Name: arth            Len: 1362 Check: 3689 Weight: 0.80
Name: orsa            Len: 1362 Check: 3609 Weight: 0.80
Name: cael            Len: 1362 Check: 1674 Weight: 1.10
Name: encu            Len: 1362 Check: 6348 Weight: 1.30
Name: trde            Len: 1362 Check: 1545 Weight: 0.90
Name: trpa            Len: 1362 Check: 5107 Weight: 1.00
Name: bobu            Len: 1362 Check: 2856 Weight: 1.10
Name: cacr            Len: 1362 Check: 4064 Weight: 1.30
Name: suto            Len: 1362 Check: 5381 Weight: 0.80
Name: suso            Len: 1362 Check: 4068 Weight: 0.80
Name: aepe            Len: 1362 Check: 6460 Weight: 1.00
Name: pyba            Len: 1362 Check: 3582 Weight: 1.10
Name: pyho            Len: 1362 Check: 7912 Weight: 0.50
Name: pyab            Len: 1362 Check: 1168 Weight: 0.50
Name: pyfu            Len: 1362 Check: 982 Weight: 0.60
Name: meja            Len: 1362 Check: 39 Weight: 1.20
Name: meth            Len: 1362 Check: 9734 Weight: 1.10
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|-----------------|-----------|-------------|--------------|
| Name: arfu | Len: 1362 | Check: 2953 | Weight: 1.20 |
| Name: hanrc | Len: 1362 | Check: 5969 | Weight: 1.30 |
| Name: psfl | Len: 1362 | Check: 411 | Weight: 0.60 |
| Name: psae | Len: 1362 | Check: 9238 | Weight: 0.60 |
| Name: esco | Len: 1362 | Check: 1559 | Weight: 0.30 |
| Name: saty | Len: 1362 | Check: 2470 | Weight: 0.30 |
| Name: yepe | Len: 1362 | Check: 9445 | Weight: 0.50 |
| Name: vich | Len: 1362 | Check: 3428 | Weight: 0.60 |
| Name: haein | Len: 1362 | Check: 7216 | Weight: 0.60 |
| Name: acac | Len: 1362 | Check: 1188 | Weight: 0.60 |
| Name: pamu | Len: 1362 | Check: 1108 | Weight: 0.60 |
| Name: neme | Len: 1362 | Check: 3299 | Weight: 0.50 |
| Name: nogo | Len: 1362 | Check: 9324 | Weight: 0.50 |
| Name: xyfa | Len: 1362 | Check: 745 | Weight: 1.00 |
| Name: buAPS | Len: 1362 | Check: 9642 | Weight: 1.10 |
| Name: sime | Len: 1362 | Check: 2002 | Weight: 0.50 |
| Name: agtu | Len: 1362 | Check: 9908 | Weight: 0.50 |
| Name: brsu | Len: 1362 | Check: 2745 | Weight: 0.60 |
| Name: melo | Len: 1362 | Check: 1945 | Weight: 0.60 |
| Name: rhpa | Len: 1362 | Check: 2243 | Weight: 0.70 |
| Name: mytu | Len: 1362 | Check: 7503 | Weight: 0.90 |
| Name: rhru | Len: 1362 | Check: 5773 | Weight: 0.90 |
| Name: noar | Len: 1362 | Check: 5341 | Weight: 1.00 |
| Name: rico | Len: 1362 | Check: 1920 | Weight: 0.60 |
| Name: ripr | Len: 1362 | Check: 2105 | Weight: 0.60 |
| Name: plyo | Len: 1362 | Check: 3699 | Weight: 1.00 |
| Name: plfa | Len: 1362 | Check: 2144 | Weight: 1.00 |
| Name: clpel | Len: 1362 | Check: 1676 | Weight: 0.70 |
| Name: clac | Len: 1362 | Check: 275 | Weight: 0.70 |
| Name: liin | Len: 1362 | Check: 6845 | Weight: 0.30 |
| Name: limo | Len: 1362 | Check: 5227 | Weight: 0.30 |
| Name: baan1 | Len: 1362 | Check: 6790 | Weight: 0.30 |
| Name: bacel | Len: 1362 | Check: 2384 | Weight: 0.30 |
| Name: basu | Len: 1362 | Check: 7169 | Weight: 0.60 |
| Name: bast | Len: 1362 | Check: 7444 | Weight: 0.60 |
| Name: baha | Len: 1362 | Check: 6042 | Weight: 0.60 |
| Name: enfa | Len: 1362 | Check: 6492 | Weight: 0.70 |
| Name: ocih | Len: 1362 | Check: 5799 | Weight: 1.00 |
| Name: stpy | Len: 1362 | Check: 2911 | Weight: 0.50 |
| Name: stpn | Len: 1362 | Check: 1693 | Weight: 0.50 |
| Name: stmu | Len: 1362 | Check: 7429 | Weight: 0.50 |
| Name: lala | Len: 1362 | Check: 6131 | Weight: 0.70 |
| Name: stau | Len: 1362 | Check: 957 | Weight: 0.90 |
| Name: oeoe | Len: 1362 | Check: 8982 | Weight: 1.00 |
| Name: thma | Len: 1362 | Check: 7588 | Weight: 1.10 |
| Name: thth | Len: 1362 | Check: 8967 | Weight: 1.10 |
| Name: dera | Len: 1362 | Check: 674 | Weight: 1.20 |
| Name: stco | Len: 1362 | Check: 8545 | Weight: 1.20 |
| Name: hepyj99 | Len: 1362 | Check: 5454 | Weight: 0.60 |
| Name: hepy26695 | Len: 1362 | Check: 7355 | Weight: 0.60 |
| Name: caje | Len: 1362 | Check: 7971 | Weight: 1.10 |
| Name: aqae | Len: 1362 | Check: 9699 | Weight: 1.00 |

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| Name: funu | Len: 1362 | Check: 2499 | Weight: 1.20 |
| Name: trer | Len: 1362 | Check: 6627 | Weight: 0.90 |
| Name: sy6803 | Len: 1362 | Check: 3226 | Weight: 0.90 |
| Name: arth_1 | Len: 1362 | Check: 4040 | Weight: 1.10 |
| Name: prma | Len: 1362 | Check: 4848 | Weight: 1.20 |
| Name: caelmt | Len: 1362 | Check: 6957 | Weight: 0.80 |
| Name: hosamt | Len: 1362 | Check: 8478 | Weight: 0.70 |
| Name: tarumt | Len: 1362 | Check: 7974 | Weight: 1.00 |
| Name: drmemt | Len: 1362 | Check: 5162 | Weight: 1.10 |
| Name: anga2 | Len: 1362 | Check: 4315 | Weight: 1.00 |
| Name: didimt | Len: 1362 | Check: 4450 | Weight: 1.10 |
| Name: caabmt | Len: 1362 | Check: 5358 | Weight: 1.30 |
| Name: sacemt | Len: 1362 | Check: 8537 | Weight: 1.30 |
| Name: scpomt | Len: 1362 | Check: 6804 | Weight: 1.30 |
| Name: lema | Len: 1362 | Check: 2900 | Weight: 1.30 |
| Name: myge | Len: 1362 | Check: 4843 | Weight: 1.00 |
| Name: mypn | Len: 1362 | Check: 832 | Weight: 1.00 |
| Name: urur | Len: 1362 | Check: 6275 | Weight: 1.20 |
| Name: mypu | Len: 1362 | Check: 6960 | Weight: 1.30 |

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| mask | | | | | |
| stpn2 | | | | | |
| bace2 | | | | | |
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
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| thnw | | | | | |
| thvo | | | | | |
| pogi | | | | | |
| bafr | | | | | |
| cyhu | | | | | |
| chte | | | | | |
| chmu | | | | | |
| chtr | | | | | |
| chpn | | | | | |
| fugu | | | | | |
| hosa | ...MRLFVS | DGVPGLPVL | AAAGRARGRA | EVLISTVGPE | DCVVPFLTRP |
| anga | CICDMIIYTN | TGNPFGLKLL | ICANLAKTNV | EVKHVTLNDP | ...ALGDMK |
| drme | | | | | |
| sace | | | | |MSF |
| scpo | | | | |MATY |
| didi | | | | | |
| arth | | | | | |
| orsa | | | | | |
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| bobu | | | | | |
| cacr | | | | | |
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| pyba | | | | | |
| pyho | | | | | |
| pyab | | | | | |
| pyfu | | | | | |
| meja | | | | | |
| meth | | | | | |
| arfu | | | | | |
| hanrc | | | | | |
| psfl | | | | | |
| psae | | | | | |
| esco | | | | | |
| saty | | | | | |
| yepe | | | | | |
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| haein | | | | | |
| acac | | | | | |
| pamu | | | | | |
| neme | | | | | |
| nogo | | | | | |
| xyfa | | | | | |
| buAPS | | | | | |
| sime | | | | | |
| agtu | | | | | |
| brsu | | | | | |
| melo | | | | | |
| rhpa | | | | | |
| mytu | | | | | |
| rhru | | | | | |
| noar | | | | | |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | ..... | ..... | ..... | ..... | ..... |
| plfa | | | | MMKPLNMILY | PHKFFLNTVK |
| clpel | | | | | |
| clac | | | | | |
| liin | | | | | |
| limo | | | | | |
| baan1 | | | | | |
| bacel | | | | | |
| basu | | | | | |
| bast | | | | | |
| baha | | | | | |
| enfa | | | | | |
| ocih | | | | | |
| stpy | | | | | |
| stpn | | | | | |
| stmu | | | | | |

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| lala | | | | | |
| stau | | | | | |
| oeoe | | | | | |
| thma | | | | | |
| thth | | | | | |
| dera | | | | | |
| stco | | | | | |
| hepyj99 | | | | | |
| hepy26695 | | | | | |
| caje | | | | | |
| aqae | | | | | |
| funu | | | | | |
| trer | | | | | |
| sy6803 | | | | | |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarumt | | | | | |
| drmemt | | | | | |
| anga2 | | | | | |
| didimt | | | | | |
| caabmt | | | | | |
| sacemt | | | | | |
| scpomt | | | | | |
| lema | | | | | |
| myge | | | | | |
| mypn | | | | | |
| urur | | | | | |
| mypu | | | | | |

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| mask | | | | | |
| stpn2 | | | | | |
| bace2 | | | | | |
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
| codi | | | | | |
| thnw | | | | | |
| thvo | | | | | |
| pogi | | | | | |
| bafr | | | | | |
| cyhu | | | | | |
| chte | | | | | |
| chmu | | | | | |
| chtr | | | | | |
| chpn | ..... | ..... | ..... | ..... | ..... |
| fugu | ..... | ..... | ..... | ..... | ..... |
| hosa | KVPVLQVDSG | NYLFSTSAIC | RYFFLLSGWE | QDDL TNQWLE | WEATELQPAL |
| anga | HLPILQLNSG | VQLFSTDVAA | KYLLPGDDAS | KVVQRDEWLE | WSSKRLAPAL |
| drme | | | | | |

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|-------|------------|------------|------------|------------|------------|
| sace | LISFDKSKKH | PAHLQLANNL | KIALALEYAS | KNLKPEVDND | NAAMELRNTK |
| scpo | KVQIPASFKT | ..SYSFAESL | KVSIAISAFS | VKVPCEGAAN | CNSVRLVNSK |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | ..... | ..... | ..... |
| orsa | ..... | ..... | ..... | ..... | ..... |
| cael | ..... | ..... | ..... | ..... | ..... |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | ..... | ..... | ..... | ..... | ..... |
| bobu | ..... | ..... | ..... | ..... | ..... |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | ..... | ..... | ..... | ..... | ..... |
| pyab | ..... | ..... | ..... | ..... | ..... |
| pyfu | ..... | ..... | ..... | ..... | ..... |
| meja | ..... | ..... | ..... | ..... | ..... |
| meth | ..... | ..... | ..... | ..... | ..... |
| arfu | ..... | ..... | ..... | ..... | ..... |
| hanrc | ..... | ..... | ..... | ..... | ..... |
| psfl | ..... | ..... | ..... | ..... | ..... |
| psae | ..... | ..... | ..... | ..... | ..... |
| esco | ..... | ..... | ..... | ..... | ..... |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..... | ..... |
| vich | ..... | ..... | ..... | ..... | ..... |
| haein | ..... | ..... | ..... | ..... | ..... |
| acac | ..... | ..... | ..... | ..... | ..... |
| pamu | ..... | ..... | ..... | ..... | ..... |
| neme | ..... | ..... | ..... | ..... | ..... |
| nogo | ..... | ..... | ..... | ..... | ..... |
| xyfa | ..... | ..... | ..... | ..... | ..... |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | .MLAAHIYKL | PVELSDDFFF | TRTFEVDKSL | IVNKKPLLIY | ENKFISSTNA |
| plfa | CMLAAHIYNF | NVELSEDFLY | TRTFDIEKSL | IINKKPLLIY | ENNYVSSTKA |
| clpe1 | | | | | |
| clac | | | | | |
| liin | | | | | |
| limo | | | | | |
| baan1 | | | | | |

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| bacel | | | | | |
| basu | | | | | |
| bast | | | | | |
| baha | | | | | |
| enfa | | | | | |
| ocih | | | | | |
| stpy | | | | | |
| stpn | | | | | |
| stmu | | | | | |
| lala | | | | | |
| stau | | | | | |
| oeoe | | | | | |
| thma | | | | | |
| thth | | | | | |
| dera | | | | | |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | ..... |
| hepy26695 | ..... | ..... | ..... | ..... | ..... |
| caje | ..... | ..... | ..... | ..... | ..... |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | ..... | ..... | ..... | ..... | ..... |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarumt | ..... | ..... | ..... | ..... | ..... |
| drmemt | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... |
| lema | ..... | MLKFFTEKAN | HQALKAVLCA | VFVQKPLEVT | LGSTYSTPYL |
| myge | ..... | ..... | ..... | ..... | ..... |
| mypn | ..... | ..... | ..... | ..... | ..... |
| urur | | | | | |
| mypu | | | | | |
| | 101 | | | | 150 |
| mask | | | | | |
| stpn2 | | | | | |
| bace2 | | | | | |
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
| codi | | | | | |
| thnw | | | | | |
| thvo | | | | | |
| pogi | | | | | |
| bafr | | | | | |

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|-------|------------|-------------|------------|------------|------------|
| cyhu | | | | | |
| chte | | | | | |
| chmu | | | | | |
| chtr | | | | | |
| chpn | | | | | |
| fugu | | | | | |
| hosa | SAPLYYLVVQ | GKKGEDVLGS | VRRALTHIDH | SLSRQNCNFL | AGETESLADI |
| anga | THNMAVGSRA | DPNTKPILNT | LVKMLDDCLS |NSTFL | TGDKISSADV |
| drme | ..... | ..... | ..... | ..... | ..... |
| sace | EP..... |FLLFDA | N..... | ..... | ...AILRYVM |
| scpo | EPEKYVSDAN | AIVSFLYWKQ | EEDLFNSFIS |SKLSI | LDWEALQFTP |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | ..... | ..... | ..... |
| orsa | ..... | ..... | ..... | ..... | ..... |
| cael | ..... | ..... | ..... | ..... | ..... |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | ..... | ..... | ..... | ..... | ..... |
| bobu | ..... | ..... | ..... | ..... | ..... |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | ..... | ..... | ..... | ..... | ..... |
| pyab | ..... | ..... | ..... | ..... | ..... |
| pyfu | ..... | ..... | ..... | ..... | ..... |
| meja | ..... | ..... | ..... | ..... | ..... |
| meth | ..... | ..... | ..... | ..... | ..... |
| arfu | ..... | ..... | ..... | ..... | ..... |
| hanrc | ..... | ..... | ..... | ..... | ..... |
| psfl | ..... | ..... | ..... | ..... | ..... |
| psae | ..... | ..... | ..... | ..... | ..... |
| esco | ..... | ..... | ..... | ..... | ..... |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..... | ..... |
| vich | ..... | ..... | ..... | ..... | ..... |
| haein | | | | | |
| acac | | | | | |
| pamu | | | | | |
| neme | | | | | |
| nogo | | | | | |
| xyfa | | | | | |
| buAPS | | | | | |
| sime | | | | | |
| agtu | | | | | |
| brsu | | | | | |
| melo | | | | | |
| rhpa | | | | | |
| mytu | | | | | |
| rhru | | | | | |
| noar | | | | | |

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| rico | | | | | |
| ripr | | | | | |
| plyo | ICFLFHRLKN | KGINTKGLDD | KLRLYLTWIE | WSDILEKNIE | RLNKKKIIES |
| plfa | ICFLFHRLRN | K..SKKPFDE | NLSYYLGWLE | WSDLLEKHIE | VLNKKNIIES |
| clpel | ..... | ..... | ..... | ..... | ..... |
| clac | ..... | ..... | ..... | ..... | ..... |
| liin | ..... | ..... | ..... | ..... | ..... |
| limo | ..... | ..... | ..... | ..... | ..... |
| baan1 | ..... | ..... | ..... | ..... | ..... |
| bacel | ..... | ..... | ..... | ..... | ..... |
| basu | ..... | ..... | ..... | ..... | ..... |
| bast | ..... | ..... | ..... | ..... | ..... |
| baha | ..... | ..... | ..... | ..... | ..... |
| enfa | ..... | ..... | ..... | ..... | ..... |
| ocih | ..... | ..... | ..... | ..... | ..... |
| stpy | ..... | ..... | ..... | ..... | ..... |
| stpn | ..... | ..... | ..... | ..... | ..... |
| stmu | ..... | ..... | ..... | ..... | ..... |
| lala | ..... | ..... | ..... | ..... | ..... |
| stau | ..... | ..... | ..... | ..... | ..... |
| oeoe | ..... | ..... | ..... | ..... | ..... |
| thma | ..... | ..... | ..... | ..... | ..... |
| thth | ..... | ..... | ..... | ..... | ..... |
| dera | ..... | ..... | ..... | ..... | ..... |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | ..... |
| hepy26695 | ..... | ..... | ..... | ..... | ..... |
| caje | ..... | ..... | ..... | ..... | ..... |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | ..... | ..... | ..... | ..... | ..... |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | .....MESLL | VTGTNYGIGE |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarunt | ..... | ..... | ..... | ..... | ..... |
| drmemt | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... |
| lema | QLPKSRALLY | SCNEAARLIW | STHAAPLPAD | NSLEGEAEWL | EWESTVLTPA |
| myge | | | | | |
| mypn | | | | | |
| urur | | | | | |
| mypu | | | | | |
| | 151 | | | | 200 |
| mask | | | | | |
| stpn2 | | | | | |

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|-------|-------------|------------|------------|------------|-------------|
| bace2 | | | | | |
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
| codi | | | | | |
| thnw | | | | | |
| thvo | | | | | |
| pogi | | | | | |
| bafr | | | | | |
| cyhu | | | | | |
| chte | | | | | |
| chmu | | | | | |
| chtr | | | | | |
| chpn | | | | | |
| fugu | | | | | |
| hosa | VLWGAQYP.. |LLQDP | AYLPEELSAL | HSWFQTLSTQ | EPCQRAAETV |
| anga | AVWSLLAPDG | TLKGAVNIDN | VLRWYRQITA | LPEVQSALAA | LPLKELSFAS |
| drme | ..... | ..... | ..... | ..... | ..... |
| sace | DDFEGQTS DK | YQFALASLQN | LLYHKELPQQ | HVEVLTNKAI | ENYLVVELKEP |
| scpo | KAYTAKTKED | FAYLLSQLET | IFKENEILNE | FTPVEVALAS | DIYFCVLNGA |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | ..... | ..... | ..... |
| orsa | ..... | ..... | ..... | ..... | ..... |
| cael | | | | | |
| encu | | | | | |
| trde | | | | | |
| trpa | | | | | |
| bobu | | | | | |
| cacr | | | | | |
| suto | | | | | |
| suso | | | | | |
| aepe | | | | | |
| pyba | | | | | |
| pyho | | | | | |
| pyab | | | | | |
| pyfu | | | | | |
| meja | | | | | |
| meth | | | | | |
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| esco | | | | | |
| saty | | | | | |
| yepe | | | | | |
| vich | | | | | |
| haein | | | | | |
| acac | | | | | |
| pamu | | | | | |
| neme | | | | | |
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| buAPS | | | | | |
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| rhpa | | | | | |
| mytu | | | | | |
| rhru | | | | | |
| noar | | | | | |
| rico | | | | | |
| ripr | | | | | |
| plyo | LDLLESYLSE | NKNKKFICDE | VDQIKREDEC | SETDQNQKND | ICGITLADIY |
| plfa | LDELELYLKE | NKNK...NK | .NFINN.DD. | .EKDENK... | ...LSLADIF |
| clpel | ..... | ..... | ..... | ..... | ..... |
| clac | ..... | ..... | ..... | ..... | ..... |
| liin | ..... | ..... | ..... | ..... | ..... |
| limo | ..... | ..... | ..... | ..... | ..... |
| baan1 | ..... | ..... | ..... | ..... | ..... |
| bacel | ..... | ..... | ..... | ..... | ..... |
| basu | ..... | ..... | ..... | ..... | ..... |
| bast | ..... | ..... | ..... | ..... | ..... |
| baha | ..... | ..... | ..... | ..... | ..... |
| enfa | ..... | ..... | ..... | ..... | ..... |
| ocih | ..... | ..... | ..... | ..... | ..... |
| stpy | ..... | ..... | ..... | ..... | ..... |
| stpn | ..... | ..... | ..... | ..... | ..... |
| stmu | ..... | ..... | ..... | ..... | ..... |
| lala | ..... | ..... | ..... | ..... | ..... |
| stau | ..... | ..... | ..... | ..... | ..... |
| oeoe | ..... | ..... | ..... | ..... | ..... |
| thma | ..... | ..... | ..... | ..... | ..... |
| thth | ..... | ..... | ..... | ..... | ..... |
| dera | ..... | ..... | ..... | ..... | ..... |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | ..... |
| hepy26695 | ..... | ..... | ..... | ..... | ..... |
| caje | ..... | ..... | ..... | ..... | ..... |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | ..... | ..... | ..... | ..... | ..... |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | LFIKYPLPLS | SACHFQVLKK | HWIQMTQQE | HMGYPGWFR | GSQRLPFIGF |
| hosamt | ..... | ..... | ..MLRTSVLR | LLGR...T. | GASRLSLL.. |
| tarumt | ..... | ..... | ..MRTRFLF | LTSG...CK | AVPELHKIVL |
| drmemt | ..... | ..... | ..MLIRRIK | CL..... |R... |
| anga2 | ..... | ..... | ..MVTRWIF | SR..... |R... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..MRFKIRG | ..... | ..... |
| sacemt | ..... | ..... | ...MQCR. | ..... | ..... |
| scpomt | ..... | ..... | ..MLRKGIC | ..... | ..... |

| | | | | | |
|-------|------------|------------|------------|------------|------------|
| lema | LTPLYTHRRI | TGEAEAALKK | LDSTIEEHQG | TVAVKGAPSS | TSFLVDSVLF |
| myge | ..... | ..... | ..... | ..... | ..... |
| mypn | ..... | ..... | ..... | ..... | ..... |
| urur | ..... | ..... | ..... | ..... | ..... |
| mypu | ..... | ..... | ..... | ..... | ..... |
| | 201 | | | | 250 |
| mask | ..... | ..... | ..... | ..... | ..... |
| stpn2 | ..... | ..... | ..... | ..... | ..... |
| bace2 | ..... | ..... | ..... | ..... | ..... |
| baan2 | ..... | ..... | ..... | ..... | ..... |
| clpe2 | ..... | ..... | ..... | ..... | ..... |
| deet | ..... | ..... | ..... | ..... | ..... |
| codi | ..... | ..... | ..... | ..... | ..... |
| thnw | ..... | ..... | ..... | ..... | ..... |
| thvo | ..... | ..... | ..... | ..... | ..... |
| pogi | ..... | ..... | ..... | ..... | ..... |
| bafr | ..... | ..... | ..... | ..... | ..... |
| cyhu | ..... | ..... | ..... | ..... | ..... |
| chte | ..... | ..... | ..... | ..... | ..... |
| chmu | ..... | ..... | ..... | ..... | ..... |
| chtr | ..... | ..... | ..... | ..... | ..... |
| chpn | ..... | ..... | ..... | ..... | ..... |
| fugu | ..... | ..... | ..... | ..... | ..... |
| hosa | LKQQGVLALR | PYLQKQPQPS | PAEGRAVTNE | PEEEELATLS | EEEIAMAVTA |
| anga | LQHSNRFGGL | HHIVLNPEIA | DFEG.ELLAD | TSANIAETVQ | REEIEAARAA |
| drme | ..... | ..... | ..... | ..... | ..EISAAKAA |
| sace | LTATDLILFA | NVYALN..SS | LVHSKFPELP | SKVHNAVALA | KKHVPRDSSS |
| scpo | PVREYPLLSA | WYLKIEKQKP | FVQALKLTFE | KTLGQPAVTS | TEKIP.VSET |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | ..... | ..... | ..... |
| orsa | ..... | ..... | ..... | ..... | ..... |
| cael | ..... | ..... | ..... | .....M | GHDLADIKKS |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | ..... | ..... | ..... | ..... | ..... |
| bobu | ..... | ..... | ..... | ..... | ..... |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | ..... | ..... | ..... | ..... | ..... |
| pyab | ..... | ..... | ..... | ..... | ..... |
| pyfu | ..... | ..... | ..... | ..... | ..... |
| meja | ..... | ..... | ..... | ..... | ..... |
| meth | ..... | ..... | ..... | ..... | ..... |
| arfu | ..... | ..... | ..... | ..... | ..... |
| hanrc | ..... | ..... | ..... | ..... | ..... |
| psfl | ..... | ..... | ..... | ..... | ..... |
| psae | ..... | ..... | ..... | ..... | ..... |
| esco | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|-----------|------------|------------|------------|------------|-------------|
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..... | ..... |
| vich | ..... | ..... | .....MLP | PLKEQLNPEK | DRGINCCAPW |
| haein | ..... | ..... | ..... | ..... | ..... |
| acac | ..... | ..... | ..... | ..... | ..... |
| pamu | ..... | ..... | ..... | ..... | ..... |
| neme | ..... | ..... | ..... | ..... | ..... |
| nogo | ..... | ..... | ..... | ..... | ..... |
| xyfa | ..... | ..... | ..... | ..... | ..... |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | VYTSLKYSNI | VICNESWSHI | NNYIERIHNL | EDVQKVVETV | EKVHKLKNIY |
| plfa | VYTSLKHSCI | EICKESWVHI | NEYIEKINNL | QEIQNVIKNV | EELIYKYKNIY |
| clpel | ..... | ..... | ..... | ..... | ..... |
| clac | ..... | ..... | ..... | ..... | ..... |
| liin | ..... | ..... | ..... | ..... | ..... |
| limo | ..... | ..... | ..... | ..... | ..... |
| baan1 | ..... | ..... | ..... | ..... | ..... |
| bacel | ..... | ..... | ..... | ..... | ..... |
| basu | ..... | ..... | ..... | ..... | ..... |
| bast | ..... | ..... | ..... | ..... | ..... |
| baha | ..... | ..... | ..... | ..... | ..... |
| enfa | ..... | ..... | ..... | ..... | ..... |
| ocih | ..... | ..... | ..... | ..... | ..... |
| stpy | ..... | ..... | ..... | ..... | ..... |
| stpn | ..... | ..... | ..... | ..... | ..... |
| stmu | ..... | ..... | ..... | ..... | ..... |
| lala | ..... | ..... | ..... | ..... | ..... |
| stau | ..... | ..... | ..... | ..... | ..... |
| oeoe | ..... | ..... | ..... | ..... | ..... |
| thma | ..... | ..... | ..... | ..... | ..... |
| thth | ..... | ..... | ..... | ..... | ..... |
| dera | ..... | ..... | ..... | ..... | ..... |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | ..... |
| hepy26695 | ..... | ..... | ..... | ..... | ..... |
| caje | ..... | ..... | ..... | ..... | ..... |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | ..... | ..... | ..... | ..... | ..... |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | MAARINTSLH | NALSFLKPFN | TPLNTPKPSF | RRNSFRFSKK |
| prma | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|--------|------------|------------|------------|------------|------------|
| caelmt | RAGSGGTVQL | RTRPFPCSGT | PPPVLGPAVT | MLRQCARWVL | TRTRFGRGCR |
| hosamt | ..... | ..... | ..... | ..... | ..EDFGP..R |
| tarumt | ..... | ..... | ..... | ..... | ..ANAAP... |
| drmemt | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... |
| lema | ASLLPALCEG | GLLPAAQAAR | VPHLVKWFQA | FQAEHAELIA | SAFDVLSVQE |
| myge | | | | | |
| mypn | | | | | |
| urur | | | | | |
| mypu | | | | | |

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|-------|------------|-------------|-------------|------------|------------|
| mask | | | | ..***** | ***** |
| stpn2 | | |MS | IFIGGAWPYA | NGSLHIGHAA |
| bace2 | | |MS | IFIGGAWPYA | NGSLHLGHIA |
| baan2 | | |MS | IFIGGAWPYA | NGSLHLGHIA |
| clpe2 | ..... | ..... | .....MK | VIIGNAWPYA | NGSLHIGRVS |
| deet | ..... | ..... | ..... | IFIGVAWPYA | NSQLHLGHVA |
| codi | ..... | ..... | .....MNNR | VLVSVAWPYA | NGPRHIGHVA |
| thnw | ..... | ..... | .....MVQIK | ILVNCALPYA | NGPLHIGHIA |
| thvo | ..... | ..... | .....MIGIK | ILVNCALPYA | NGPLHVGHIA |
| pogi | ..... | ..... | ...MDRQFKR | TLITTALPYA | NGPVHIGHLA |
| bafr | ..... | ..... | ...MEKNFKR | TTVTSALPYA | NGPVHIGHLA |
| cyhu | ..... | ..... | ...MTNKPSR | YTITSALPYA | NGPVHIGHLA |
| chte | ..... | ..... | VLPMTHIPKR | TLVTTALPYA | NGPVHLGHIA |
| chmu | ..... | ..... | .....MASSR | ILITSALPYA | NGPLHFGHIT |
| chtr | ..... | ..... | .....MESSR | ILITSALPYA | NGPLHFGHIT |
| chpn | ..... | ..... | .....MPQK | VLITSALPYA | NGPLHFGHIA |
| fugu | ..... | ..... | ...LPQEDKKN | FLVTSALPYV | NNVPHLGNII |
| hosa | WEKGLS... | ..LPPLRPQON | PVLPVAGERN | VLITSALPYV | NNVPHLGNII |
| anga | FGETDD... | ..RAVRDEPR | IVLPKPGQKN | NLITSALPYV | NNVPHLGNIV |
| drme | FTYTAP... | ..KEIKEE.R | TVLPKPGERN | VLITSALPYV | NNVPHLGNII |
| sace | FKNIGAVKIQ | ADLTVKPKDS | EILPKPNERN | ILITSALPYV | NNVPHLGNII |
| scpo | TRNVNSQHLM | RERVPGEK.. | ..ILPKSNERN | ILITSALPYV | NNVPHLGNIV |
| didi | ..... | ..... | .....N | ILITSAFPYV | NNVPHLGNII |
| arth | .MEDDG... |KSSP. | .KLPIPGKRN | ILITSALPYV | NNVPHLGNII |
| orsa | .MASPP... |PPPPP | PKLPVPGRRN | ILVTSALPYV | NNVPHLGNII |
| cael | FEASLPG... | ..YVEKKDPK | SILPQPGKRN | ILITAALPYV | NNVPHLGNII |
| encu | ..... | ..... | .....MK | KFITSALPYV | NNQPHLGNII |
| trde | ..... | ..... | ..... | ..VTSALPYV | NNFPHLGNLI |
| trpa | ..... | ..... | .....MTR | KLITAALPYV | NNVPHLGNLI |
| bobu | ..... | ..... | .....MKKM | NLVTAALPYV | NNIPLHGNLV |
| cacr | ..... | ..... | .....MAR | ILITSALPYI | NGIKHLGNLA |
| suto | ..... | ..... | .....MK | IFVASAWPYV | NAVPHLGNLI |
| suso | ..... | ..... | .....MK | VLVTAAPYV | NSVPHLGNLI |
| aepe | ..... | ..... | .....MAK | YVVTSAWPYV | NHVPHLGTLI |
| pyba | ..... | ..... | .....MAK | YVIGSAWPYV | QTVPHLGNMI |
| pyho | ..... | ..... | .....MVR | YMVTSALPYA | NGPIHAGHLA |

| | | | | | | | |
|-------|------------|------------|------------|------------|-------------|------------|------------|
| pyab | ..... | ..... | ..... | MVR | YMVTSALPYA | NGPIHAGHLA | |
| pyfu | ..... | ..... | ..... | MVR | YMVTAALPYA | NGPIHAGHLA | |
| meja | ..... | ..... | ..... | MR | YLITTALAYT | NGPLHLGHAR | |
| meth | ..... | ..... | ..... | MSK | VFITCALPYA | NGPThLGHlR | |
| arfu | ..... | ..... | ..... | M | KLVTCGLPYA | NGKAHVGHlR | |
| hanrc | ..... | ..... | M | TDEDYPTDDP | AVVTCGLPYP | TGDLHIGHlR | |
| psfl | ..... | ..... | ..... | VKPHMSEPRK | ILVTSALPYA | NGSIHLGHML | |
| psae | ..... | ..... | ..... | ..... | ILVTSALPYA | NGSIHLGHML | |
| esco | ..... | ..... | ..... | MPTMTQVAKK | ILVTCALPYA | NGSIHLGHML | |
| saty | ..... | ..... | ..... | ..... | ILVTCALPYA | NGSIHLGHML | |
| yepe | ..... | ..... | ..... | MAQVAKK | ILVTCALPYA | NGSIHLGHML | |
| vich | RDCVLRVVLs | LQFGLYQEKR | ILSMANDPRK | LLVTCALPYA | NGSIHLGHML | | |
| haein | ..... | ..... | ..... | MTTQPRK | ILVTCALPYA | NGAIHLGHML | |
| acac | ..... | ..... | ..... | MSNNKRK | ILVTCALPYA | NGPIHLGHML | |
| pamu | ..... | ..... | ..... | MANSARD | ILVTCALPYA | NGAIHLGHLL | |
| neme | ..... | ..... | ..... | MTRK | ILVTSALPYA | NGSIHLGHMV | |
| nogo | ..... | ..... | ..... | ..... | ILVTSALPYA | NGSIHLGHMV | |
| xyfa | ..... | MPYSH | PLVPLSFMTT | ALVTTALPYA | NGPLHLGHlV | | |
| buAPS | ..... | ..... | ..... | MSSVFRK | ILVTCALPYA | NGSIHIGHML | |
| sime | ..... | MRDTS | ..... | P | FYITTAISYP | NGKPHIGHAY | |
| agtu | ..... | MTDKT | ..... | P | FYITTAISYP | NGKPHIGHAY | |
| brsu | ..... | MSRE | ..... | K | YYITTAIAYP | NGKPHIGHAY | |
| melo | ..... | MSRE | ..... | K | YYLTTPIFYYP | NGKPHIGHAY | |
| rhpa | ..... | MAQRN | ..... | S | FYITTAIAYP | NGAPHIGHAY | |
| mytu | ..... | MK | ..... | P | YYVTTAIAYP | NAAPHVGHAY | |
| rhru | ..... | MAGPKP | ..... | P | FYLTTPIYYV | NDKPHIGHAY | |
| noar | ..... | MGE | ..... | P | FYITTAISYP | NGKPHIGHAY | |
| rico | ..... | MNN | ..... | T | YYITTPiYYV | NDIPHIGHAY | |
| ripr | ..... | MKN | ..... | T | YYITTPiYYV | NDVAHIGHAY | |
| plyo | SLFISKVCEK | NINDHVKNd | ..... | N | FYITTAISYV | NGEPHIGHAY | |
| plfa | SVFISKIHDK | NVNEYLKNE | ..... | T | FYITTAiNYV | NGDPHIGHAY | |
| clpel | ..... | MCKK | ..... | P | YYITTPiYYP | STNLHIGNTY | |
| clac | ..... | MSEKK | ..... | K | FYITTPiYYP | SAKLHIGNTY | |
| liin | ..... | MPEEKN | ..... | T | FYITTPiYYP | SGKAHIGHAY | |
| limo | ..... | MPEEKN | ..... | T | FYITTPiYYP | SGKAHIGHAY | |
| baanl | | MRLFGR | FKTMTEENK | | S | FYITTPiYYP | SGKLHIGHAY |
| bacel | | R | SKTMTKENK | | S | FYITTPiYYP | SGKLHIGHAY |
| basu | | | MPQENN | | T | FYITTPiYYP | SGKLHIGHAY |
| bast | | | MEKK | | T | FYLTTPIYYP | SDKLHIGHAY |
| baha | | | MSKEQK | | T | FYLTTPIYYP | SDKLHIGHAY |
| enfa | | MTKG | GFFCMSQKE | | T | FYITTPiYYP | SGKLHIGNSY |
| ocih | | | MARE | | NA | FYITTPiYYP | SGKLHIGNAY |
| stpy | | | MMKK | | P | FYITTPiYYP | SGKLHIGSAY |
| stpn | | VLEKQVSFA | WKGKIMSEK | | N | FYITTPiYYP | SGKLHIGSAY |
| stmu | | | MTEKQ | | P | FYITTPiYYP | SGKLHIGSAY |
| lala | | | MTENK | | T | FYITTPiYYP | SGKLHLGSSY |
| stau | | | MAKE | | T | FYITTPiYYP | SGNLHIGHAY |
| oeoe | | | MTKKN | | R | FYITTPiYYP | SGKLQLGNTY |
| thma | | | M | | K | FYITTPiYYV | NSEPHIGSAY |
| thth | | | MEK | | V | FYVTTPIYYV | NAEPHLGHAY |
| dera | | MQNPPQHPE | AQSPETRDR | | E | FFITAAIDYA | NGTPHIGHVY |
| stco | | MAA | TGTEKQGAK | | A | YYVSTPIYYV | NDAPHLGHAY |

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|-----------|------------|-------------|------------|---------|-------------|------------|
| hepyj99 | |MQ. | |K | SLITTTPIYYV | NDIPHIGHAY |
| hepy26695 | |MQ. | |K | SLITTTPIYYV | NDIPHIGHAY |
| caje | ..... | ..... | ..... | .....M | RYITTTPIYYV | NDVPHLGHAY |
| aqae | ..... | .....MTLMK. | ..... | .....K | FYVTTPIYYV | NDVPHLGHAY |
| funu | ..... | .....MKK. | ..... | .....N | FFVSTPIYYV | NGDPHVGSAY |
| trrer | ..... | MKNMYTDKN. | ..... | .....T | FAITTTPLYV | NDLPHIGSAY |
| sy6803 | ..... | ..MLDSSVP. | ..... | .....T | FSVTTPLYV | NDVPHLGSAY |
| arth_1 | LPYYSQFSSG | KRALYCTSSS | QESTVDEGET | | FVLTTPLYV | NAPPHMGSA |
| prma | ..... | ..... | ..... | .....MS | FVITTTPLYV | NDKPHLGSY |
| caelmt | RYGSCSPSAS | GDAG..EAR. | ..... | ..... | AYFTTPIFYV | NAAPHIGHLY |
| hosamt | YYSSGSLSAG | DDAC..DVR. | ..... | ..... | AYFTTPIFYV | NAAPHIGHLY |
| tarumt | ...VKNPEIR | YAST..ENR. | ..... | .....N | YYITTTPIFYV | NASPHLGHLY |
| drmemt |YLGTR | YNSS..... | ..... | ..... | HYVTTPIFYV | NAAPHIGHLY |
| anga2 |FSSQI | QHS..... | ..... | ..... | .FVTTPIFYV | NAAPHIGHLY |
| didimt | ..... | ..... | ..... | ..... | ..ITTTPIFYV | NGPPHIGHLY |
| caabmt |PLIQLR | YKST....K. | ..... | .....A | FYITTTPIFYV | NAAPHIGHLY |
| sacemt |SIVHRL | YS.....K. | ..... | .....V | SHVTTPIFYV | NAKPHLGHLY |
| scpomt |RLIHQV | SESS..K.K. | ..... | .....P | YFLTTPIFYV | NAAPHLGHLY |
| lema | CGDFLRVPQT | YEVSPKKQK. | ..... | .....V | FFATTPIYYV | NASPHIGHVY |
| myge | ..... | .....MK. | ..... | .....R | CYITTTPIYYA | SGKPHIGHAF |
| mypn | |MK. | |R | CYITTTPIYYA | SGKPHIGHAF |
| urur | |MLKQK. | |K | FFISTPIYYV | SGNPHIGHAY |
| mypu | |MKK. | |T | IYITTTPIYYP | SGDLHLGHIY |

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|-------|------------|-------------|------------|------------|-------|-------------|
| mask | .***** | *.*****. | | ***** | ***** | *****. |
| stpn2 | .ALLPGDILA | R.YYRQKGEE |VLYVSG | SDCNGTPI | SI | RAKKENK.SV |
| bace2 | .SLLPGDILA | R.YYRAKGEN |VLYVSG | SDCNGTPI | IAI | RAKQEGV.TA |
| baan2 | .SLLPGDILA | R.YYRAKGEN |VLYVSG | SDCNGTPI | IAI | RAKQEGV.TA |
| clpe2 | .SWMAGDILA | R.YHRAKGDE |VIFVSG | SDCHGSPILN | | KAKEINK.SP |
| deet | GAYLPADIFA | R.YHRTRGDE |VLMVSG | SDMHGTPITI | | RAEQEGI.TA |
| codi | GFGVPSDVFA | R.YQRMGAE |VLMVSG | TDEHGTPLL | LV | QADKEGV.SV |
| thnw | GAYLGADV | R.YNRLMGNQ |VLYVSG | SDEYGTPI | TV | RAEKEGR.SP |
| thvo | GAYLGADV | R.FNRLIGNE |VLYVSG | SDEYGTPI | TV | RAEKEGK.SP |
| pogi | GVYVPADIYA | R.YLRLRGRD |CLLIGG | SDEHGVP | IAL | KAKAEGC.TP |
| bafr | GVYVPADIYV | R.YLRLKKED |VLFIGG | SDEHGVP | PITI | RAKKEGI.TP |
| cyhu | GVYVPADIYA | R.FLRSKGEN |VLFIGG | SDEHGVP | PITI | RAKKEGV.TP |
| chte | GVYLPADIYV | R.YKRLCGHD |VIHIGG | SDEHGVP | PITI | TADKEGI.SP |
| chmu | GAYLPADVYA | R.FQRLGKE |VLYICG | SDEYGIAITL | | NAELAGM.GY |
| chtr | GAYLPADVYA | R.FQRLQGKE |VLYICG | SDEYGIAITL | | NAELAGM.GY |
| chpn | GVYLPADVYA | R.FRLLGDD |VLYICG | SDEFGIAITL | | NADREGL.GY |
| fugu | GCVLSADVFS | R.YSRLRGWN |VLFVCG | TDEYGTATEN | | KAIEEGL.TP |
| hosa | GCVLSADVFA | R.YSRLRQWN |TLYLCG | TDEYGTATET | | KALEEGL.TP |
| anga | GCVLSADIFA | R.YSRLCGYN |TLYIGG | TDEYGTATET | | KALAENM.TP |
| drme | GCVLSADIYA | R.YSRSAGYN |TLLICG | TDEYGTATEN | | KALAENL.TP |
| sace | GCVLSADIFA | R.YCKGRNYN |ALFICG | TDEYGTATET | | KALEEGV.TP |
| scpo | GSTLSADVFA | R.YHRARNHN |TLYICG | TDEYGTATET | | KALEEGV.SP |
| didi | GCVLSADVYA | R.RYCRLKNYN |CIYICG | TDEYGTATET | | KALSEGC.TP |
| arth | GCVLSADVYA | R.YCRLRGYN |AIYICG | TDEYGTATET | | KALEENC.TP |
| orsa | GCVLSADVFA | R.YCRLRGYN |VIYICG | TDEYGTATET | | KAMEEK.C.SP |
| cael | GCVLSADVFA | R.YCNLRGHQ |TFYVGG | TDEYGTATET | | KALQEGC.TP |
| encu | GCVLSADVYS | R.YCKKKGEV |SVYICG | TDEYGTAIEM | | EAISQGV.TP |

| | | | | | |
|-------|-------------|-------------|--------------|------------|------------|
| trde | .QVLSADVFA | R.FCRLKEYE | ...TLYICG | TDEYGTATET | KALEEKK.SP |
| trpa | .QGLSADVFA | R.FCRMGRYH | ...TCFVCG | TDEYGTASET | RAAEQGL.SP |
| bobu | .QVLSADAFV | R.YSKMSGIE | ...TLYVCG | TDEYGTATET | KALIENT.TP |
| cacr | GSMLPADVYA | R.FKRAQGHE | ...TLYICA | TDEHGTPAEL | AAAAAGQ.DV |
| suto | GSVLSADVFA | R.YARLKYGQ | E..NVVSVSG | SDEHGTPIEV | EAKKRN.NP |
| suso | GSILSADVFA | R.YARLRYGK | E..NVLFVSG | SDEHGTPIEI | EAIKRKV.NP |
| aepe | GSVLSADIYA | R.YLRLRGRQ | ...VVFVSG | SDEHGTPIEL | EARKKGV.HP |
| pyba | GSVLSADVYA | R.YLRLKGHE | ...VVFVSG | SDVHGTPVEV | EAIQLGV.DP |
| pyho | GAYLPADIFV | R.YLRLKGED | ...VVFICG | TDEHGTPISF | RALKEGR.SP |
| pyab | GAYLPADIFV | R.YLRLKGED | ...VVFICG | TDEHGTPISF | RALKEGR.SP |
| pyfu | GAYLPADIFV | R.YLRLKGED | ...VVFICG | TDEHGTPISF | RALNEKR.SP |
| meja | STYIPADIIY | K.YLKLKRGD | ...VIHVGG | TDNHGVPITL | TAEKEGK.SP |
| meth | STYIPADIYA | R.YRRLRGDD | ...VLFVCA | TDEHGTPIAV | KAEAEGR.TP |
| arfu | .TYVPADVYV | R.YLRMSGEE | ...VVFVCG | SDCHGTPIVV | NAEQQGL.SP |
| hanrc | .TYVSGDAFS | R.ALKRLGQE | ...TVFVSG | TDMHGTPIAV | QAIEAGV.GP |
| psfl | .EYIQDMWV | R.FQKHRGNQ | ...CIYVCA | DDAHGSAIML | RAEKEGI.TP |
| psae | .EYIQDMWV | R.FQKMRGNQ | ...AVYVCA | DDAHGSAIML | RAEREGI.TS |
| esco | .EHIQADVWV | R.YQRMRGHE | ...VNFICA | DDAHGTPIML | KAQQLGI.TP |
| saty | .EHIQADVWV | R.YQRMRGHE | ...VNFICA | DDAHGTPIML | KAQQLGI.TP |
| yepe | .EHIQADIWV | R.FQRMGNQ | ...VHFICX | DDAHGTPIML | KAQQXGI.EP |
| vich | .EHIQADIWV | R.YQRLRGNT | ...VNFICA | DDAHGTPIML | KAQQMGM.TP |
| haein | .EHIQADIWV | R.FQRMGNK | ...IHFVCA | DDAHGTPIML | NADKLG.TP |
| acac | .EHIQADIWV | R.FQRMRGNE | ...IHFVCA | DDAHGTPIML | KADQMGI.TP |
| pamu | .EHIQADIWV | R.FQRMGRHK | ...VHFICA | DDAHGTPIML | NADKLG.TP |
| neme | .EHIQTDVWV | R.FQKLRGNE | ...CHYCCA | DDTHGTPVML | AAQKQGI.AP |
| nogo | .EHIQTDVWV | R.FQKLRGHE | ...CYCCA | DDTHGTPVML | AAQKQGI.AP |
| xyfa | .GYIQADIWV | R.ARRLGGHN | ...TWFVCA | DDTHGTPIML | AAEKAGM.PP |
| buAPS | .EHIQADIWV | R.YHRMRGHE | ...VVFVSA | DDAHGTAIML | KAQDLEI.SP |
| sime | .ELIATDAMA | R.FQRLDG.. | ..REVFFLTG | TDEHGQKMQQ | TAKKEGI.SP |
| agtu | .ELIATDAMA | R.FQRLDG.. | ..MDVFFLTG | TDEHGQKMQQ | TARAEGI.SP |
| brsu | .ELIATDAMA | R.FQRLNG.. | ..MDVYFLTG | TDEHGKMLQ | SARKEGI.TP |
| melo | .TVIATDALA | R.FQRLDG.. | ..KDVFFLTG | TDEHGLKMQQ | TAEKEGI.TP |
| rhpa | .EAIATDALA | R.FQRLDG.. | ..KDVFFLTG | TDEHGLKMIQ | TAQKEGL.TP |
| mytu | .EYIATDAIA | R.FKRLDR.. | ..YDVRFLTG | TDEHGLKVAQ | AAAAAGV.PT |
| rhru | .TTLACDVLA | R.FKRLDG.. | ..FDVKFLTG | TDEHGQKVQK | SATAAGI.DP |
| noar | .EAIAADVIA | R.FQRAMG.. | ..RDVRFQTG | TDEHGLKMAQ | KARELGI.TP |
| rico | .TSVASDVIA | R.FMRLRG.. | ..FDVMFLTG | TDEHGQKVEK | AAINKNI.DP |
| ripr | .TSVASDVIA | R.FMRF CG.. | ..KDV MFLT G | TDEHGQKVEK | AAINQNI.DP |
| plyo | .EII LADAIA | R.YHRNLG.. | ..RDIFFTTG | ADEHGLKIAN | QALRNNM.TP |
| plfa | .EIVLADAIA | R.YHKIIG.. | ..RDTFFTTG | ADEHGLKIAN | QAAKNNM.TP |
| clpel | .TTVAADAIA | R.FKRLTG.. | ..HEVMFLTG | TDEHGQKIER | IANEKGI.TP |
| clac | .TTVASDALV | R.FKRLQG.. | ..YDAFMLTG | TDEHGQKIQR | IAEDKGI.TP |
| liin | .TTVAGDAMA | R.YKRLKG.. | ..YDV FYLTG | TDEHGQKIQA | KAKERGI.SE |
| limo | .TTVAGDAMA | R.YKRLKG.. | ..YDV FYLTG | TDEHGQKIQA | KAKERGI.SE |
| baan1 | .TTVAGDAMA | R.YKCMQG.. | ..YNVHYLTG | TDEHGQKIQK | KAEELNV.TP |
| bacel | .TTVAGDAMA | R.YKRMQG.. | ..YNVHYLTG | TDEHGQKIQK | KAEELNV.TP |
| basu | .TTVAGDAMA | R.YKRLKG.. | ..FDVRYLTG | TDEHGQKIQQ | KAEQENI.TP |
| bast | .TTVAGDAMA | R.YKRLRG.. | ..YDVMYLTG | TDEHGQKIQR | KAQEKGV.TP |
| baha | .TTVAGDAMA | R.YKRLRG.. | ..YNVMYLTG | TDEHGQKIEQ | KAEAKGL.TP |
| enfa | .TTIACDAMA | R.YKRLMG.. | ..FDV FYLTG | VDEHGQKIEK | KAAELNV.TP |
| ocih | .TTIACDVMA | R.YKRMRG.. | ..FDV FYLTG | SDEHGQKIEQ | KAKEMNI.SP |
| stpy | .TTIACDVLA | R.YKRLMG.. | ..HEV FYLTG | LDEHGQKIQT | KAKEAGI.TP |

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stpn .TTIACDVLA R.YKRLMG.. .YDVFFYLTG LDEHGQKIQQ KAE EAGI.TP
stmu .TTIACDVLA R.YKRMMN.. .HDVFFYLTG LDEHGQKIQQ KSEEAGI.TP
lala .TTIACDVLA R.YKRLMG.. .FDTFFYLTG LDEHGMKIQR KAEELGM.TP
stau .STVAGDVIA R.YKRMQG.. .YDVRVYLTG TDEHGQKIQE KAQKAGK.TE
oeoe .TTVLADSV A R.FHRALG.. .EDVFFFLT G TDEHGLKIQE KAE AAGK.SE
thma .TTIVADI I A R.YKRFGM G.. .YDVFFFLT G TDEHGQKVLQ AAQQAGK.DP
thth .TTVVADFL A R.WHRLDG.. .YRTFFFLT G TDEHGETVYR AAQAAGE.DP
dera .EKILADA I A R.YQRLAG.. .RDVTFVMG TDEHGEKISK AAKGGV.TP
stco .TTVAGDVLT R.WHRQRG.. .EKVWYLTG TDEHGQKIMR TAEANGV.TP
hepyj99 .TTLIADTLK K.YYTLOG.. .EEVFFFLT G TDEHGQKIEQ SARLRNQ.SP
hepy26695 .TTLIADTLK K.YYTLOG.. .EEVFFFLT G TDEHGQKIEQ SARLRNQ.SP
caje .TTIIADTL A R.FYRLQG.. .HETRFLT G TDEHGQKIEE AAKLRNS.TP
aqae .TTIAADT I A R.YYRLRD.. .YDVFFFLT G TDEHGLKIQK KAEELGI.SP
funu .TTIAADV I N R.YNKAMG.. .MDTHFVTG LDEHGQKVEQ AAKQNGF.TP
trer .TTIAADTL A R.FQRLQG.. .RSVLMITG TDEHGQKIQR TAENKGR.NP
sy6803 .TTVVADTL A R.FKRLQG.. .YDVLMITG TDEHGQKIQR TAEAQEL.DP
arth_1 .TTIAADS I A R.FQRLLG.. .KKVIFITG TDEHGEKIAT SAAANGR.NP
prma .TTLICDS I A R.YKRLTG.. .ADVIFITG VDEHGLKIQR TAKNKGV.EP
caelmt .SALLADAL C R.HRRLRVPG S.ASTRFSTG TDEHGLKIQQ AAATAGL.AP
hosamt .SALLADAL C R.HRRLRGPS T.AATRFSTG TDEHGLKIQQ AAATAGL.AP
tarumt .SAVIADCFH R.HKQLQG.. .FNSRFATG TDEHGLKIQQ AA E AAGK.EP
drmemt .SAVIADAHC R.YQRLRYPE Q.DVRLCTG TDEHGTKIQQ AASLHGV.PV
anga2 .SSVIADA I H R.FNQITRPA ESGDCFLSTG TDEHGLKIQQ AA I KHST.ST
didimt .SALLGDAL G R.WN..R... .RFMTG TDEHGSKVDE AAKKNGL.KT
caabmt .SMLIADTR N K.WEKLNPSK ...ESFMLTG TDEHGLKIQS TAEKLG L.EP
sacemt .SSLLSDVYH R.WQLFKGN. ...LSFFTTG TDEHGLKIQC ASESNQFDQP
scpomt .SLVLTDA I A R.FQNLKPDV ...SVISSTG TDEHGLKVQT VAQTEGV.SP
lema .STLIVDVLG R.YHRVKGE.. .EVFVMTG TDEHGQKVAE AAKQGV.SP
myge .TTILADVI K R.FKIQNG.. .YEAFLLVG SDEHGKIES KAKSLNL.DP
mypn .TTILADVI K R.YKQONG.. .YEAYFLT G TDEHGKIES KAKSLGL.DP
urur .TTIIADVLA R.YKRLFG.. .YDVFFFLT G MDEHGQKIQQ KAFEENI.SP
mypu .STNIAWVLR N.YKKIQG.. .YETFFSTG SDEHGQKIFN KAQELKL.ET

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mask ***** . . . . . ***** * . . . . ***** ** . . . . . *
stpn2 KEIADFYHKE FKETFE.KLG FTYDLYSRTD SPLHHEIVQE LFLQLYEKKF
bace2 KEIANKYHEE FQRCFR.NLG FTYDCYTRTD SEHHHKT VQK VFLRLLLEEGH
baan2 KEIANKYHEE FERCFR.NLG FTYDCYTRTD SEHHHETVQN VFLRLLLEEGH
clpe2 EELINKYHRE FVRCFN.KLG FSNIFTRTD SEYHEKQVKN I IKS LYNKGF
deet AEVAERYHRL FMASWP.KLG ISWDCYTSTA TANHARTAQQ MFLSLEYEGY
codi KELADRYNRQ IVEDLA.GLG LSYDLFTRTT TRNHYAVVQD LFKGLYENGY
thnw KEIADIYEE HLRTFE.NLG ISFDIFMRTT WPEHSENAQD FFIKLLNEGY
thvo QEIADRYYAE HIETFK.KLG INF DIFMRTT YPEHSSVAQE FFLKLLNEGV
pogi QEVVD RYHEL IKRSFE.GLG ISFDIYSRTT SDIHRRTASE FFKTLYEKGE
bafr QDVVD RYHFL IKKSFE.EFG ISFDVYSRTS SKTHHELASD FFKKLYEKGE
cyhu QQVVDKYHVQ IKQSFE.ELG ISFDIYSRTS SKIHAETSSE YFKKLYEDGK
chte QEVVD RYHTM NAE AFA.KCG ISFDYYGR TS GPVHHQTARE FFLEIEK KGI
chmu QEYVDMYHKL HKDTLK.KLG ISVDFFSRTT NPHHPAIVQD FYRNLQDKGL
chtr QEYVDMYHKL HKDTFK.KLG ISVDFFSRTT NTYHPAIVQD FYRNLQERGL
chpn QEYVDMYHKL HKDTFE.KLG FALDFFSRTT NPFHAELVQD FYSQLKASGL
fugu QEICDKYHAI HSAIYK.WFQ IDFDFFGRTT TEKQTVIAQD IFWRLLHKNNF
hosa QEICDKYHII HADIYR.WFN ISFDIFGR TT TPQQT KITQD IFQQLLKRGF

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| | | | | | |
|-------|-------------|-------------|------------|-------------|-------------|
| anga | RQICDKYFDI | HNSIYR.WFG | IGFDYFGRTT | TAEQTRIVQD | IFKELYASGY |
| drme | REICDKYFEL | HNAIYR.WFG | IGFDYFGRTT | TQEQTCEPQS | WLYHHRERGA |
| sace | RQLCDKYHKI | HSDVYK.WFQ | IGFDYFGRTT | TDKQTEIAQH | IFTKLNNSNGY |
| scpo | KELCDKYHAL | HKEVYD.WFE | IDFDHFGRRT | TPKQTGIAQH | IFTKLYNNDY |
| didi | KEICDKYHEI | HKEIYE.WFN | ISFDKFGRTS | TNSQTEIAQD | IFNKIKDNGY |
| arth | KEICDKYHAI | HKEVYD.WFG | ISFDKFGRTS | TPEQTEVCQA | IFNKLWDNKW |
| orsa | KEICDKYHAV | HSEVYK.WFD | IKFDKFGRTS | SPQQTEVCQA | IFQKLMENNW |
| cael | RELCDKYHAI | HKGIYE.WFG | IDFSHFGRRT | TDHQTEICQD | MFLKLHKNGY |
| encu | LEICEKNRKL | HKQVYD.WFN | IDFDYFGFTS | SATHTGLVQD | LFMKMYDNHG |
| trde | EELCSFYHAI | HAEIYN.WFN | IAFDYFGRTS | TPQQTEITQG | IFNDLDKNGY |
| trpa | AQLCAHYHAL | HRDIYQ.WFD | LSFDYFGRTT | SDAHTELTQA | LFRHLDARGF |
| bobu | LELCNKYYEI | HKSIYK.WFN | IEFDIFGRRT | NKNHQDIVQN | FFLQLEKNGY |
| cacr | ATYCAEQHVL | QHEVGR.AFG | LSWDHFGRSS | SPQNHRLTQH | FCQALEDHGL |
| suto | KELTDQAHEY | DKKLFLDVWE | ISYNNYTRTE | SEIHKTFVRD | FMLKLEK..Y |
| suso | KELTDQAHEY | DRHLFLNVWK | ISFDNYTRTE | SEIHKKFVRE | FLLKLTK..Y |
| aepe | KELTDQVHEY | DVKMWR.EYR | ISFDNYSRTE | SPVHKEFVME | FMKKLEENGY |
| pyba | AEYSMKMHAI | VAELFK.KWN | ISFDLYTHTH | SETHIKFVQD | FYLKIYENGY |
| pyho | REIVDEFHEH | IKITFQ.RAK | ISFDFFGRTE | LPIHYKLSQQ | FFLKAYENGH |
| pyab | REIVDEFHEQ | IKITFQ.RAK | ISFDFFGRTE | LPIHYKLSQE | FFLKAYENGH |
| pyfu | REIVDEFHEH | IKTAFQ.RVK | ISFDYFGRTE | LPVHYRLSQE | FFLKALENGY |
| meja | EEIVEKYHNE | IKEDLD.LLG | VEFDAFGKTH | SQIHIEATAQE | FYLKLEKNGY |
| meth | LEVATRYHEM | IRGDLE.RCD | ISFDSFTRTT | DELHHEIAQK | FFLKLYEKGF |
| arfu | KELVDIYHEH | FIKIFD.ALN | IKFDYFGRTD | SDYHHHRTTE | IVKRLIEKGY |
| hanrc | LDLGLERHEQ | YADTFE.EFS | VAFDTYGHTD | EETNVELTRE | FVGAWEDNDH |
| psfl | EQLIANVQAE | HSADFA.EFL | VDFDNFHSTH | AEENRELSSQ | IYLKLRDAGH |
| psae | EQLIDAVRAE | HMGDFA.DFL | VDFDNHSTH | SEENRELSSA | IYLKLRDAGH |
| esco | EQMIGEMSQE | HQTDFA.GFN | ISYDNYHSTH | SEENRQLSEL | IYSRLKENGF |
| saty | EQMIGEMSQE | HQTDFA.GFN | ISYDNYHSTH | SDENRELSEL | IYTRLKENGF |
| yepe | EQMIAEMSQE | HQODFA.GFA | ISYDNYHSTH | SDENRELSSL | IYGRLEKANGY |
| vich | EAMIEMVSEE | HQRDFA.GFD | ISFDNYHSTH | SDENRELASH | IYLQLEKNGF |
| haein | EELIAKAKAD | HIRDFA.GFN | ISFDNYHSTH | SEENKQLTAE | IYNKLEKANGF |
| acac | EQLIDDRVQK | HMAFDA.GFN | ISFDNYHSTH | SEENRELSEL | IYNRLKENGF |
| pamu | EALIARSKAD | HVADFE.GFN | ISYDNYHSTH | SPENEALTAE | MYKKLRANGF |
| neme | EDMIAKVREE | HLADFT.GFF | IGYDNYYSTH | SPENKQFSQD | IYRALKANGK |
| nogo | EDMIAKVRKE | HLADFT.GFF | IGYDNYYSTH | STENKQFSQD | IYRALKANGK |
| xyfa | EAFIATTQAS | HERDFA.AFN | VAFDHYDSTH | SPVNRHLTEQ | SYLTLKQAGH |
| buAPS | NKLIKNIKRIE | HQIDFS.NFK | ISHDNYYSTH | SLENLYLSRK | IFTCLNEKGL |
| sime | QELAARNSAE | .FQNMARLLN | ASNDDFIRTT | EQRHHEASQA | IWMRMGEAGD |
| agtu | EELAQRNSDQ | .FREMGLLN | ASNDDFIRTT | EERHHESTRN | IWNLMADSGD |
| brsu | RELADRNTSA | .FRRMAEVLN | SSNDYIRTS | EERHYKASQA | IWQAMVANGD |
| melo | QALADRNSAI | .FRSMTEAVG | GSNDEYIRTT | EPRHYASCQA | IWKAMAANGD |
| rhpa | HALATRAGR | .FREMDDLRLG | VSYDRFIRTS | EEQHHRVQVE | VWKRMDKGD |
| mytu | AALARRNSDV | .FQRMQEALN | ISFDRFIRTT | DADHHEASKE | LWRRMSAAGD |
| rhru | QTFTDRVSAN | .FRDLAAMN | FSNDAFIRTT | EPRHKEACKA | LWTLLEVERGE |
| noar | RELSDEMSSY | .FIKMCDELN | VSYDVFIRTT | EERHHASTQE | LWRRMEANGD |
| rico | QKFTDQTSSES | .FRHLMTAMH | ISNDDFIRTT | EHRHKKAVAV | FWQKLLDNGT |
| ripr | QTFTDKTSQN | .FRDLMVAMN | ISNDDFIRTT | ENRHKKAVAV | FWKKLLDNGA |
| plyo | QELCDLNVIK | .FKKLNKDLH | TTEDYVVRTT | ADIHKKIAQS | IWMKCVENGD |
| plfa | KELCDKNVLK | .FQNLNKLLY | VEDDYVVRTT | RDSHKKIAQE | VWDKCEKNGD |
| clpel | KEHVDEIVAG | .IKDLWKMMN | ISYDKFIRTT | DDYHVKAVQE | IFKKLYDQGD |
| clac | KAYVDEIVAG | .IKDLWKMMN | ISYDKFIRTT | DEEHVKAVQK | IVKKFYDNGD |
| liin | QEYVDEIAEG | .FQELWKKLE | ISNTDFIRTT | QDRHKTSVEK | IFEQLLEQGD |

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|-----------|-------------|---------------|------------|-------------|-------------|
| limo | QEYVDEIAEG | .FQELWKKLE | ISNTDFIRTT | QDRHKTSVEK | IFEQLLEQGD |
| baan1 | QAYVDNIVAG | .IKELWEKMD | ISYDDFIRTT | EDRHKDVVEK | IFKQLVDQGD |
| bace1 | QAYVDNIVAG | .IKELWEKMD | ISYDDFIRTT | EDRHKDVVEK | IFKQLVDQGD |
| basu | QEYVDRAAAD | .IQKLWKQLE | ISNDDFIRTT | EKRHKVVEK | VFQKLLDNGD |
| bast | QQYVDDIVAG | .IQELWRKLD | ISYDDFIRTT | QERHKKIVEK | IFARLVEQGD |
| baha | KQFVDEIVSG | .IQDLWKKLD | ISYDDFIRTT | EERHIKVVQQ | IFEQLLDQGD |
| enfa | KEYVDKMAAD | .VQKLWKTLD | ISYDKFIRTT | DDYHMAAVQQ | IFDRLVEQGD |
| ocih | KAYVDDMAEG | .MKKLWNTLE | ISNDKFIRTT | EEQHKKVVAD | IFERFLEQGD |
| stpy | QTYVDNMAKD | .VKALWQLLD | ISYDTFIRTT | DDYHEEVVAA | VFEKLLAQDD |
| stpn | QAYVDGMAVG | .VKELWQLLD | ISYDKFIRTT | DDYHEKVVAQ | VFERLLAQDD |
| stmu | QAYVDGMAVG | .VKELWQLLD | ISYDKFIRTT | DDYHEKVVAQ | VFEKLLAQDD |
| lala | KEYLDPMAAD | .VQELWKKLD | ISYDKFIRTT | DTYHEEAVAK | AFEQLLEQDD |
| stau | IEYLDEMIAG | .IKQLWAKLE | ISNDDFIRTT | EERHKHVVEQ | VFERLLKQGD |
| oeoe | MEYLDEMAVS | .IKKLWKLMLN | ISYDKFIRTT | DEYHERVVQH | IFKKFMDEGD |
| thma | QEFCDLAEK | .FKRLWKELK | ITNDYFIRTT | DEMHHMKTVE | FVAKMKENGD |
| thth | KAFVDRVSGR | .FKRAWDLG | IAYDDFIRTT | EERHKKVVQL | VLKKVYEAGD |
| dera | QELVDDLSE | AFQGLWKKLG | ISYDFFIRTT | SAKHKKYVQD | VLQRVYDAGD |
| stco | QAWADKLVTE | SWKPLWEHL | IANDDFIRTT | QKRHTDRVQE | FVQDLYDKGE |
| hepyj99 | KAYADSI | SAI.FKNQWDFFN | LDYDGFIRTT | DSEHQKCVQN | AFEIMFEKGD |
| hepy26695 | KAYADSI | STI.FKDQWDFFN | LDYDGFIRTT | DSEHQKCVQN | AFEIMFEKGD |
| caje | QEYADKISFE | .FKKLWDEFE | ITYDIYARTT | DTRHIEFIKA | MFLKMWQKGD |
| aqae | KELVDRNAER | .FKKLWEFLK | IEYTKFIRTT | DPYHVKFVQK | VFEECYKRGD |
| funu | QAWTDKMTPN | .FKNMWAALD | IKYDDFIRTT | EDRHKKAVKR | ILDIVNAKGD |
| trer | KEHCDSVVRG | .FESLWEQLN | IQYDRFIRTT | APNHEKIVKE | FFQRVWEKED |
| sy6803 | QTHCDRTVVK | .FKELWRSLN | ILYDRFSRTT | DPRHLAIVKD | FFQRVWDKGD |
| arth_1 | PEHCDLISQS | .YRTLWKDLD | IAYDKFIRTT | DPKHEAIVKE | FYARVFANGD |
| prma | QFHCDEISDI | .FKQNWKNWD | ITHNKFVRTS | SQKHEYIVKE | FYNRVKKSDD |
| caelmt | IELCDRVSAQ | .FLQLFREAD | ISSTDFIRTT | EARHRVAVQH | FWGVLEARGL |
| hosamt | TELCDRVSEQ | .FQQLFQEQAG | ISCTDFIRTT | EARHRVAVQH | FWGVLKSRLG |
| tarumt | LEFCTTVSER | .FRHLFSSCN | ISNTDYIRTT | EQRHHRVAVQH | FWSVLCSSKGL |
| drmemt | AKYCDDISQR | .YREVFERSAS | IQQDDFIRTT | EDRHKRAVAN | FWRTLHTRGH |
| anga2 | EDYCDIAISTK | .YRELFDRFQ | IDYSRFIRTT | DTDHRQAVQA | FWRSLAASDS |
| didimt | IDYCDKISNR | .FRELFDKAD | IKYDDFIRTT | EPRHKEAVTA | IWNRLLEGRY |
| caabmt | KVLVDKVSQN | .FSKLAEQFD | VNYDRFIRTT | DNDHIELVRY | FWNLMMKGF |
| sacemt | KKFVDKLYPE | .FVQLDKIYG | INYTRFIRTT | DPDHIENVMK | LWELCLKNGY |
| scpomt | LQLCDRNSKR | .FADLAVAA | TKFTHFIRTT | NPKHQASVQE | FWKTIQKAGM |
| lema | MDFTTSVSSE | .FKQCFQEMN | YDMNYFIRTT | NPTHEKLVQD | IWKKLAAGD |
| myge | KTFVDINAQA | .FKLMWKTLD | ISFDHFIRTT | DEIHKQQVQK | TFQDLYDKKL |
| mypn | QTFVDQNVAY | .FQQMWKQLD | INFDFHIRTT | DLSHKAQVQH | AFQLLYDKGL |
| urur | KALVDRNSII | .FLNLWKRLN | ISFSKFIRTT | QMDHEESVQK | VFSYLYKQGK |
| mypu | QDYVDRQANK | .FIDFWKKAN | IDYDFFARTT | NKEHKEVVRE | IFHKLKEKNI |

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| | | | | | |
|-------|------------|-------------|------------|------------|------------|
| mask | ***** | ***** | | | |
| stpn2 | LYTKKIKQLY | CTFDNQFLPD | RFVEGKCPN. | .CG.THSRGD | QCDN.CSAIL |
| bace2 | IYKKTVEQAY | CETCTQFLPD | RYVEGICPH. | .CH.EAARGD | QCDN.CSAIL |
| baan2 | IYKKTVEQAY | CETCTQFLPD | CYVEGVCPH. | .CH.EEARGD | QCDN.CSAIL |
| clpe2 | IYEKETEIFY | CP..... | ...K..... | ..... | .....CCDTL |
| deet | IYKDTVCQPF | CPHCNRFLPD | RYVEGTCPH. | .CKYEGARGD | QCDN.CGKPL |
| codi | MIKETTMAV | SPSTGRTLPLD | RYIEGTCPY. | .CGASGARGD | QCDN.CGNQL |
| thnw | IEKGTMIAPF | CRKIGRFMPD | RYIEGTCPY. | .CHYPKARGD | QCDN.CGRTL |
| thvo | IEKGTMIAPY | CRKIGRFMPD | RYIEGECY. | .CGYKKARGD | QCDN.CGRTL |

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|-------|------------|------------|------------|------------|------------|
| pogi | FVEQTSEQYY | DEEAKQFLAD | RYIIGTCPH. | .CSNDRAYGD | QCEA.CGTSL |
| baf | FIEKTSEQYY | DEEAHQFLAD | RYITGECPH. | .CHSEGAYGD | QCEK.CGTSL |
| cyhu | FIEQTSEQYY | DPKAEQFLAD | RYIIGTCPK. | .CGNENAYGD | QCEK.CGSTL |
| chte | FVKKTEKQFF | DPKAGRFLSD | RYITGTCPV. | .CKTPGANGD | QCEQ.CGTHL |
| chmu | MENLVTDQLY | SEEEKFLAD | RYVVGTCPK. | .CGFDRARGD | ECQQ.CGADY |
| chtr | VENQVTEQLY | SEEEKFLAD | RYVVGTCPK. | .CGFDRARGD | ECQQ.CGADY |
| chpn | IENRISEQLY | SEQEQRFLAD | RYVEGTCPR. | .CGFDHARGD | ECQS.CGADY |
| fugu | LLEDTVEQLR | CENCQRFLAD | RFVEGICPH. | .CAYPEARGD | QCDK.CGRLI |
| hosa | VLQDTVEQLR | CEHCARFLAD | RFVEGVCPF. | .CGYEEARGD | QCDK.CGKLI |
| anga | IETRSVEQLL | CQKCDRYLAD | RFVEGTCPHP | GCGYEDARGD | QCDG.CGKLV |
| drme | VALP.KGTLF | QAPTYPLFCY | SFVEGTCPHP | GCGYEDARGD | QCDK.CGKLV |
| sace | LEEQSMKQLY | CPVHNSYLAD | RYVEGECPK. | .CHYDDARGD | QCDK.CGALL |
| scpo | MAIDTMTQLY | CEVHQGYLAD | RYVEGTCPK. | .CGYDDARGD | QCDG.CGGLL |
| didi | TLTQEIEQLY | S..... | ..... | ..... | .....KLL |
| arth | LSENTMQQLY | CDTCKKFLAD | RLVEGSCPFE | GCNYDSARGD | QCEK.CGKLL |
| orsa | LTENTMQQLY | CDTCQRFLAD | RLVEGKCPTE | GCNYEAARGD | QCEN.CSKLL |
| cael | TSSQSVDQLY | CNQCEKFLAD | RFVTGTCP.. | MCAYDDARGD | QCDG.CGKLI |
| encu | FSEVEIEQFY | CEHCGLFLAD | RFIVGECKF. | .CGDGRARGD | QCDS.CGHTY |
| trde | ITEHTIEQLY | CPSCKRFLAD | RYVLGTCP. | .CSYDGARGD | QCEH.CGKLL |
| trpa | ISEHESAQAY | CLHCARFLAD | RYLRGTCPH. | .CRNAEARAD | QCEH.CGVLL |
| bobu | IKERETEQFY | CNKDSMFLAD | RYVIGECPE. | .CQ.SMAKGD | QCDN.CSKLL |
| cacr | IEERVDQMVY | SVDDKRFLPD | RYVEGTCPH. | .CKFEKARGD | QCDN.CGNLL |
| suto | IKIEEDEIPY | CEYDKIYLPD | RFVKGTCPY. | .CGFEDARGD | QCDN.CGRLI |
| suso | IKVSEDEIPY | CENDKLYLPD | RFVKGTCPY. | .CGFEDARGD | QCDN.CGKLL |
| aepe | IFSQEEVLPY | CERDKIFLPD | RFVEGTCPY. | .CGYEKARGD | QCDE.CGRLI |
| pyba | IFTKEDEVY | CPRDKIYLPD | RFIIGKCPY. | .CGYERARGD | QCEN.CGRLI |
| pyho | LVKKVTKQAY | CEHDKMFLPD | RFVIGTCPF. | .CGAENQRGD | QCEV.CGRPL |
| pyab | LVKKVTKQAY | CEHDKMFLPD | RFVIGTCPY. | .CGAEDQKGD | QCEV.CGRPL |
| pyfu | LVKKVTKQAY | CEHDKRFLPD | RFVIGTCPY. | .CGAENQRGD | QCEV.CGRPL |
| meja | IYEKEIEQFY | CPNCKKFLPD | RYVEGICPY. | .CGG.EARGD | HCEV.CGRHL |
| meth | IYEKDIKQLY | CGDCQRFLPD | RYVEGTCPY. | .CGSEGARGD | HCEG.CGRHL |
| arfu | VYPKEIQLAY | CPKCQRFLPD | RYVEGICPY. | .CG.ALARGD | ECDQGCGRHL |
| hanrc | VYETEIQVAY | DPDADQWLPD | RYVEGTCPY. | .CG.EHARGD | ECDEGCQRHL |
| psfl | IAQRSITQYF | DPEKKMFLAD | RFIKGTCPK. | .CGTEDQYGD | NCEK.CGATY |
| psae | IDTRPVTQYF | DPEKQMFLAD | RFIKGTCPK. | .CGTADQYGD | NCEA.CGATY |
| esco | IKNRTISQLY | DPEKGMFLPD | RFVKGTCPK. | .CKSPDQYGD | NCEV.CGATY |
| saty | IKNRTISQLY | DPEKGMFLPD | RFVKGTCPK. | .CKSADQYGD | NCEV.CGATY |
| yepe | IKNRTISQLY | DPEKGXXLPD | RFVKGTCPK. | .CXAPEQYGD | NCEV.CGATY |
| vich | ISSRTISQLF | DPEKEMFLPD | RFVKGTCPK. | .CKSEDQYGD | NCDA.CGETY |
| haein | IKSKVISQLF | DPEKNMFLPD | RFVKGTCPK. | .CKAEDQYGD | NCEV.CASTY |
| acac | IKSRTISQLY | DPEKGMFLPD | RFVKGTCPK. | .CKSPDQYGD | NCEV.CAATY |
| pamu | IKSRTISQLF | DPEKGMFLPD | RFVKGTCPK. | .CKAEDQYGD | NCEV.CSSTY |
| neme | IESRVIEQLF | DPEKQMFLPD | RFVKGECPK. | .CHAQDQYGD | NCEV.CGTTY |
| nogo | IESRVIEQLF | DPEKQMFLPD | RFVKGECPK. | .CHAQDQYGD | NCEV.CGTTY |
| xyfa | ITCRSVAQFY | DPAKGMFLPD | RYVKGTCPN. | .CGATDQYGD | NCEA.CGATY |
| buAPS | IKEKKIFQLY | DTVKKIFLPD | RFIKGTCP. | .CKSKNQYGD | NCEI.CSATY |
| sime | LYKDSYAGWY | SVRDEAYYQE | NETELRGDG. | ..... | ..... |
| agtu | IYKDSYAGWY | SVRDEAYYAE | DETEVRADG. | ..... | ..... |
| brsu | IYKGGYAGWY | SVRDEAYYGE | EETEVADG. | ..... | ..... |
| melo | IYLDYSGWY | SVRQEAYFDE | SETTLGEDG. | ..... | ..... |
| rhpa | IYLDYSGWY | SVRDEAYYAE | DETVVGDG. | | |
| mytu | IYLDNYSGWY | SVRDERFFVE | SETQLVDGT. | | |

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|-----------|------------|-------------|-------------|--------|----------|
| rhru | IYLDAYRGWY | AVRDEAFYGE | DELTTAADG. | | |
| noar | LYLDRYEGWY | SVRDEAFYDE | SELVAGEGG. | | |
| rico | IYEGFYEGWY | AVRDEAFFDE | SELTR..... | ..... | ..... |
| ripr | IYEGFYEGWY | SVRDEAFYDE | SEINE..... | ..... | ..... |
| plyo | IYLGEYEGWY | NVREETYIPE | NEAKLMN... | ..... | ..... |
| plfa | IYLGEYEGWY | NVREETYVPE | NEAKLMN... | ..... | ..... |
| clpel | IYKDSYEGLY | CTPCESFWTE | TQLVN..... | ..... | ..... |
| clac | IYKSAYEGWY | CTPCESFWTE | TQLVD..... | ..... | ..... |
| liin | IYLGEYEGWY | SVSDEEYFTE | TQLEEVYKDE | ..... | ..... |
| limo | IYLGEYEGWY | SVSDEEYFTE | TQLEEVYKDE | ..... | ..... |
| baan1 | IYLDEYEGWY | SVQDETFYTE | HQLVDP.IME | ..... | ..... |
| bacel | IYLDEYEGWY | SVQDETFYTE | HQLVDP.IME | ..... | ..... |
| basu | IYLDEYEGWY | SIPDETFYTE | TQLVDIERNE | ..... | ..... |
| bast | IYLGEYEGWY | CTPCESFYTE | RQLVD..... | ..... | ..... |
| baha | IYLGDYEGWY | SIPDETFYTE | TQLVDKEYDA | ..... | ..... |
| enfa | IYLGEYEGWY | SVSDEEFFTE | TQLAEVYRDD | ..... | ..... |
| ocih | IYLDEYEGWY | SVPDETFYTE | TQLEDVERDD | ..... | ..... |
| stpy | IYLGEYSGWY | SVSDEEFFTE | SQLKEVFRDE | ..... | ..... |
| stpn | IYLGEYSGWY | SVSDEEFFTE | SQLAEVFRDE | ..... | ..... |
| stmu | IYLGEYSGWY | SVSDEEFFTE | SQLEEIFRDE | ..... | ..... |
| lala | IYLKGYAGWY | SVSDEEFFTE | TQLEEIFRDE | ..... | ..... |
| stau | IYLGEYEGWY | SVPDETYYTE | SQLVDP.QYE | ..... | ..... |
| oeoe | IYKGNVTGWY | SVSDEEYFTE | SQLAEVYRDK | ..... | ..... |
| thma | VYKGIYKGWY | CVPCETFWNE | DEVIK..... | ..... | ..... |
| thth | IYYGEYEGLY | CVSCERFYTE | KELVEG.... | ..... | ..... |
| dera | IYFAEYEGLY | SVGAERYVTE | KELVEGP... | ..... | ..... |
| stco | IYKGGYEGPY | CVGCEEYKLP | GELLDGEGEY | ..... | ..... |
| hepyj99 | IYKGTYSGY | CVSCEYSYCAV | SKVDNTDSK. | ..... | ..... |
| hepy26695 | IYKGAYSGY | CVSCEYSYCAI | SKADNTNDK. | ..... | ..... |
| caje | IYKDEYEGHY | CISCESFFTQ | SQLINDCS.. | ..... | ..... |
| aqae | IYLGEYEGWY | CVGCEEFKSE | AELAEDHT.. | ..... | ..... |
| funu | IYKGEYEGKY | CVSCETFFPE | NQLNGSNK.. | ..... | ..... |
| trer | IYLSQQKGWY | CVSCEEFKEE | RELTED.... | ..... | ..... |
| sy6803 | IYLAQQQGWY | CVACEEFKEK | RDILLED.... | ..... | ..... |
| arth_1 | IYRADYEGLY | CVNCEEYKDE | KELLEN.... | ..... | ..... |
| prma | IYMGVQKGWY | CVGCEEFKDN | PDNSPT.... | ..... | ..... |
| caelmt | LYKGIYEGWY | CASDECFLPE | AKVTRQV... | ..... | .....G |
| hosamt | LYKGVYEGWY | CASDECFLPE | AKVTQQP... | ..... | .....G |
| tarumt | IYKGSYEGWY | STQDESFLTP | SQVTTAL... | ..... | .....D |
| drmemt | IYSAAYSGWY | CVSDETFLTD | SQLRLD.... | ..... | .....E |
| anga2 | IYSASYSGWY | CVPDETFLTD | SQLKEN.... | ..... | .....E |
| didimt | IYKGVYKGWY | CTSDESFLTD | DQVTEGMSPI | T..... |PQN |
| caabmt | IYTDTHSGWY | SISDETFEPE | TQIEEVV... | ..... | .....K |
| sacemt | IYMGEHKGWY | SISDETFYPE | SKVIKDP... | ..... | .....K |
| scpomt | ISFERHEGWY | CVSDETFYPE | SAIQKVV... | ..... | .....D |
| lema | IYLKGYEGWY | SVSDESFLTA | QNVADG.... | ..... | .....V |
| myge | IYQSEWKGAY | CVECEQNY.. | ...FTF.... | ..... | ..... |
| mypn | IYQSNWEGAY | CVECEQNY.. | ...FTY.... | | |
| urur | IYLGQWTGY | CVSCEENYNP | AEIIKS.... | | |
| mypu | IYLDKYVGLY | SVSDEEFLTE | TQALKK.... | | |

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|-----------|-------------|-------------|-------------|--------------|------------|
| nogo | SPTLINPYS | AVSGA.KPEL | RESEHFFFKL | GECADFLKAW | TSGNNPHDG. |
| xyfa | DPTLNPNYS | VISGT.TPEL | RDSEHFFFEV | AHFDTFLRHW | LSG.DV.... |
| buAPS | EPTDLINPIS | VISGK.KPIL | KNTKHLDFDL | PSFTNMLKKW | IHS.GV.... |
| sime |VRYG | PQ.GTP.VEW | VEEESYFFRL | SAYQDKLLKH | YEE.NPD... |
| agtu |VRYG | PQ.GTP.VEW | VEEESYFFFKL | SEYQEKLLKL | YEE.NPD... |
| brsu |VRYG | PQ.GTP.VEW | VEEESYFFRL | SAYQDKLLDL | YEN.NPG... |
| melo |VRRE | PL.GSP.VEW | NEEESYFFRL | SAYQDKLLAL | YES.QPD... |
| rhpa |VRRG | PQ.GTP.VEW | VEEKSYFFKL | SAYQDKLLKL | YED.QPD... |
| mytu |RLTV | ET.GTP.VTW | TEEQTYFFRL | SAYTDKLLAH | YHA.NPD... |
| rhru |SRLA | PT.GAP.VEW | VEEPSYFFRL | SKWQQPLLDL | YAA.RPD... |
| noar |EKLS | PQ.GTP.VDW | TVEESWFFRL | SKYAEPLLKL | YEE.NPG... |
| rico |DGLA | PT.GAP.VEW | VKEPSYFFNL | SKWQDKLLEF | YEA.NPD... |
| ripr |DKLA | PT.GAP.VEW | VKEPSYFFNL | AKWQDKLLEF | YEL.NPD... |
| plyo |YID | PLNNVK.LEK | MKEPSYFFRM | SKYQDRLLQY | IHD.NPD... |
| plfa |YID | PLNNIK.LEK | MKEPSYFFKM | SKYQDKLIEY | IQS.NPD... |
| clpel |GNC | PDCGRP.VEK | AKEEAYFFKM | SKYADRLIQY | IEE.HPD... |
| clac |GKC | PDCGRP.VEK | TKEEAYFFKM | SKYADRLIKY | IED.HPD... |
| liin | .NGKVI GGKA | P.SGNE.VEL | VKEESYFFRM | SKYADRLVEY | YNS.HPE... |
| limo | .NGKVI GGKA | P.SGNE.VEL | VKEESYFFRM | SKYADRLVEY | YNS.HPE... |
| baan1 | .GDKVVG GKS | PDSGHD.VEL | VREESYFFRM | GKYVDRL LKF | YED.NPH... |
| bacel | .GDKVVG GKS | PDSGHD.VEL | VREESYFFRM | GKYVDRL LKF | YEE.NPH... |
| basu | .KGEVIG GKS | PDSGHP.VEL | IKEESYFFRM | GKYADRL LKY | YEE.NPT... |
| bast |GNC | PDCGRP.VEK | VKEESYFFRM | SKYVDRL LQY | YEE.NPD... |
| baha | .DGNLIG GKS | PDSGHP.VEK | VREQSYFFRM | SKYADRL LQF | YEE.NPQ... |
| enfa | .EGNVIG GKA | P.SGHE.VEL | VKEESYFFRM | SKYADRL VQY | YEE.HPE... |
| ocih | .DGNVIG GKS | PDSGHP.VEL | IKEESYFFRM | SKYADRL LKF | YED.NPE... |
| stpy | .DGQVIG GIA | P.SGHE.VEW | VSEESYFLRL | SKYDDRL VAF | FKE.RPD... |
| stpn | .AGNVTG GIA | P.SGHE.VEW | VSEESYFLRL | SKYQDR LVEF | FKA.HPE... |
| stmu | .DGKVI GGIA | P.SGHE.VEW | VSEESYFLRL | SNYADRL VDF | FHA.HPD... |
| lala | .SGNITG GIA | P.SGHE.VEW | VEEETYFFRM | GKYADW L LQY | YDE.HPD... |
| stau | .NGKIIG GKS | PDSGHE.VEL | VKEESYFFNI | SKYTDRL LEF | YDQ.NPD... |
| oeoe | .DGKVI GGKA | P.SGHE.VQL | VKEETYFFKM | SKYSDW L LQY | YHD.HPE... |
| thma | .EGE..ERFC | PECKRP.VKW | VEEENYFFRL | SKYRDSL LKY | YEE.HPD... |
| thth |LC | PIHGRP.VER | RKEGNYFFRM | EKYRPWL QEY | IQE.NPD... |
| dera | .DGV...RRF | PGDKDP.PEL | RREANYFFNM | QKYQPWL LET | LQQ.NPD... |
| stco | .AG...QKLC | PIHKKP.VEI | LSEENYFFKL | SEYSEKLLAH | YEA.NPG... |
| hepyj99 |VLC | PDCLRE.TTL | LEEESYFFKL | SAYEKPLLEF | YAK.NPE... |
| hepy26695 |VLC | PDCLRE.TTL | LEEESYFFRL | SAYEKPL LDF | YAK.NPE... |
| caje |C | PDCGKQ.TRI | LKEESYFFKL | SKYQDK I LQW | YEE.K.D... |
| aqae |C | PIHQKK.CEY | IKEPSYFFRL | SKYQDK LLEL | YEK.NPE... |
| funu |C | PDCGKD.LTV | LKEESYFFKM | SKYADAL LKH | IDE.HPD... |
| trer |KHC | VIHTNQKVEW | RDEQNYFFRL | SRYQERL QAF | YQD.RQE... |
| sy6803 |NHC | PLHPNRKAEW | RDEENYFFRL | SRYQHPL EEL | YAQ.RPE... |
| arth_1 |NCC | PVHQMP CVAR | K.EDNYFFAL | SKYQKPL EDI | LAQ.NPR... |
| prma |HKC | PIHQKT.LEW | KNEENLFFKL | SKYQSQ I EEL | IK..EPA... |
| caelmt | PSG.DPCPVS | LESGHP.VSW | TKEENYIFKL | SQFREPL QRW | LGN.NPQ... |
| hosamt | PSG.DSFPVS | LESGHP.VSW | TKEENYIFRL | SQFRKPL QRW | LRG.NPQ... |
| tarumt | STG.KEIKVS | LESGHK.VEW | MKEENYMFRL | SGFRSQL LDW | LRE.NPR... |
| drmemt | AT...GTRYS | LESGHP.VEW | TEETNYMFRL | SQFQDDVRHW | VK..TEA... |
| anga2 | R...GEKYS | LESGHP.VEW | TEENYMFRL | SRYQDDVRHW | VKGLEGR... |
| didimt | PIS.KKCMIS | LESGHE.VNW | IEEENYMFKL | SEFSKTIENW | FE..EVK... |
| caabmt | NG..KAVKIS | SETKNE.VVY | QEETNYFFKL | SMFQEQL IQF | LKQ.NPE... |

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|--------|------------|------------|------------|------------|------------|
| sacemt | N...DGKYLN | TESKNE.VVY | QSETNYFFRL | SLFNKKIVDH | IRK.NPD... |
| scpomt | PATKQEKRV | METGKE.VQW | SSEMNYHFLL | SKFQSRLEH | YNK.NPN... |
| lema | DRDGKPCV | LESGHV.VTW | VEEENYMFRL | SAFRERLLKY | FHD.HPN... |
| myge | ...NKQTML | CEIGHN.LSL | VQEPWFISF | SSTKNWIETT | IGK.NQL... |
| mynp | ...DKQTML | CEIGHQ.LTL | VQEPSLFIAF | KDSKDWIGEM | IAT.NKL... |
| urur | ...QDNIML | CRMGHK.LET | KSEESYFYKM | SDQAPFLKTY | YQN.HPN... |
| mypu | ...DNKFFH | PVSNHE.LIK | IEEESYFFNL | NLFIDWIKEF | LDQ.D..... |

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|-------|-------------|-------------|------------|------------|-------------|
| mask | | | ...***** | *.....** | ****..... |
| stpn2 | ..RWRKNAIN | LTKRYLREG. | ...LPDRAVT | R..DLP..NG | IPVPIDG... |
| bace2 | ..TWRDNAIQ | LTERYVKEG. | ...LLDRAVS | R..DLP..IG | VPIPVEG... |
| baan2 | ..TWRDNAIQ | LTERYVKEG. | ...LLDRAVS | R..DLP..IG | VPIPVEG... |
| clpe2 | ...WRENAIK | ITKRYLEGG. | ...LRDKILT | R..EIN..WG | IEVPIEG... |
| deet | ..YWRTNVLN | FTRLRYLKEG. | ...LKDRAIT | R..DLD..WG | VPLPLPGYE. |
| codi | ..DWRPNVLK | FSLNLLED.. | ...LRPRAMS | R..DID..WG | IPIPVEGWQD |
| thnw | ..FWKPNVLA | YTQNFISGG. | ...LKKRPIT | R..DID..WG | VKIPLDGYD. |
| thvo | ..FWKPNVLA | YTRNFIQGG. | ...LKKRAIT | R..DID..WG | VKVPLEGYE. |
| pogi | ..EWKSNVYG | QCKSWLDMG. | ...LQPRAVS | R..DLD..WG | IPVPVEG... |
| bafr | ..EWRPNVYG | QCKSWLDMG. | ...LQPRAVS | R..DLD..WG | IPVPVEG... |
| cyhu | ..NWKTNVYG | QCKSWLDQG. | ...LQPRAVT | R..DLD..WG | VPVPVAG... |
| chte | ..DWRSNVVN | YSRTWLNQG. | ...LADRAIT | R..DLA..WG | ISLPLDSEE. |
| chmu | ...LRPHMRN | FVIDYIKN.. | ...LRPRAVT | R..DLS..WG | VPVPG..... |
| chtr | ...LRPHMRN | FVTDYIEH.. | ...LRPRAVT | R..DLS..WG | IPVPD..... |
| chpn | ...LPDHVRK | FVVDYIEH.. | ...VRSRAIT | R..DLS..WG | IPVPD..... |
| fugu | ..DWTANAKQ | ITRSWLRDG. | ...LKPRCIT | R..DLK..WG | TPVPH..... |
| hosa | ..DWTNAQF | ITRSWLRDG. | ...LKPRCIT | R..DLK..WG | TPVPLE.... |
| anga | ..GWTHNARV | ITRAWLKEG. | ...LKSRCIT | R..DLK..WG | IPVPLE.... |
| drme | ..GWTHNAKV | ITRAWLKEG. | ...LKPRCIT | R..DLK..WG | IPVPHE.... |
| sace | ..NWSKNSKT | ITQSWLKDG. | ...LKPRCIT | R..DLV..WG | TPVPLE.... |
| scpo | ..KWSNNGRS | ITESWLKEG. | ...LRPCIT | R..DLK..WG | TPVPLE.... |
| didi | ..NWSSENSIA | ITNTWVKGE. | ...LKPRCIT | R..DLK..WG | TPVPM..... |
| arth | ..SWSQNAIQ | TTNAWLRDG. | ...LRQRCIT | R..DLK..WG | VPVPHE.... |
| orsa | ..MWSQNAIQ | ATNAWLKEG. | ...LKPRCIT | R..DLK..WG | VPVPHE.... |
| cael | ..NRWSSNAV | ITKAWMKLG. | ...LDPRCIT | R..DLK..WG | TAVPLD.... |
| encu | ..HLWSQNAQN | IFRQWISME. | ...FYPRCMT | R..DLKFNWG | VPVPLE.... |
| trde | ..RWSNNALQ | MSKSWLRDG. | ...LQERAIT | R..DLK..WG | IPVPK..... |
| trpa | ..LWTKNAVR | MTEGWLRTG. | ...LQERAIT | R..DLR..WG | VPVPA..... |
| bobu | ..NWNNTNALK | MTKAFLRDG. | ...LKERAIT | R..DLK..WG | IPVPK..... |
| cacr | ..DWPPPLARS | IAYKHLDEG. | ...LIDRGIT | R..DLA..WG | IPVAQDGVPR |
| suto | ..TLPENVKS | VALSWVKEG. | ...LKPRSIT | R..DNA..WG | IPAPFE.... |
| suso | ..EMPDNVKS | VALSWVGEG. | ...LKPRSIT | R..DNK..WG | IPAPFE.... |
| aepe | ..ELQDSVKK | YSINWVAQG. | ...LKPRSVT | R..DLS..WG | VPAPFK..... |
| pyba | ..HLPPNAKE | MSLAMLKEG. | ...LRPRAVT | R..DNK..WG | IPAPFP..... |
| pyho | ..PWKPNVKN | MVLKWIEEG. | ...LEERAIT | R..DLN..WG | IPVPLDEED. |
| pyab | ..PWKPNVKN | MVLSWIEEG. | ...LEERAIT | R..DLN..WG | IPVPLDEED. |
| pyfu | ..DWKPNVKN | MVLGWIEEG. | ...LEERAIT | R..DLD..WG | IPVPLDEED. |
| meja | ..EMPEHVKN | MALNWIKE.. | ...LHDWDIS | R..DIS..WG | VPIPG..... |
| meth | ..EMPSNVRN | YAIQWLREG. | ...LKDWILT | R..DME..WG | VQVPLEGN.. |
| arfu | ..KGTENALN | YARNWVKN.. | ...LRDWCIT | R..NLE..WG | VRFPGE.... |
| hanrc | ..EGTNNAKN | QPREWIEGG. | ...LEDFCIT | R..DLD..WG | IDYPGEGG.. |
| psfl | ...LQDAVAN | KIAEWLDAG. | ...LQQWDIS | R..DAP.YFG | FEIPGE.... |

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|-----------|------------|------------|-------------|------------|------------|
| psae | ...LQESVAN | KLAEWLDSG. | ...LQQWDIS | R..DAP.YFG | FEIPDA.... |
| esco | ...LQEQVAN | KMQEWFESG. | ...LQQWDIS | R..DAP.YFG | FEIPNA.... |
| saty | ...LQEQVAN | KMQEWFESG. | ...LQQWDIS | R..DAP.YFG | FEIPNA.... |
| yepe | ...LQEQVAN | KMQEWFDSG. | ...LQQWDIT | R..DAP.YFG | FEVPDA.... |
| vich | ...LQSETAN | KMQEWFEGG. | ...LQQWDIS | R..DAP.YFG | FEIPGE.... |
| haein | ...LQSEIAN | KMQEWFESD. | ...LQQWDIS | R..DAP.YFG | FEIPGA.... |
| acac | ...LQSEVVN | KMQEWFEGG. | ...LQQWDIS | R..DAP.YFG | FQIPNE.... |
| pamu | ...LQPEIAN | KMQEWFESG. | ...LQQWDIS | R..DAP.YFG | FKIPDT.... |
| neme | KPHLQAEALN | KMKEWLGEGE | ETTLSDDWDIS | R..DAP.YFG | FEIPDA.... |
| nogo | KPHLQPEALN | KMKEWLGEGE | ETTLSDDWDIS | R..DAP.YFG | FEIPDA.... |
| xyfa | ...ALPSVKN | KLKEWLDAKG | G..LRPWDIS | R..DAP.YFG | FEIPNQ.... |
| buAPS | ...LEESVIK | KTEEWFKVG. | ...LKSVAIS | R..DAP.YFG | FKIPNY.... |
| sime | FIGPAERRNE | VIS.FVKSG. | ...LKDLSVS | R...TTFDWG | IKVP..... |
| agtu | FIGPAERRNE | IIS.FVKSG. | ...LKDLSIS | R...TTFDWG | IKVP..... |
| brsu | FIMPAERRNE | IVS.FVKSG. | ...LKDLSIS | R...TTFDWG | IPVP..... |
| melo | FVGPAERRNE | VMS.FVKSG. | ...LKDLSIS | R...TTFKWG | VPVP..... |
| rhpa | FIGPDSRRNE | VIS.FVKSG. | ...LKDLSVS | R...TTFDWG | VKVP..... |
| mytu | FIAPETRRNE | VIS.FVSGG. | ...LDDLSIS | R...TSFDWG | VQVP..... |
| rhru | FIAPDSRRNE | VIS.FVKGK. | ...LTDLSIS | R...TTFSWG | VPVP..... |
| noar | FIQPDSRRNE | VMR.FVEGG. | ...LRDLSVS | R...TSFDWG | VKVP..... |
| rico | FIRPISRRNE | VIS.FVKSG. | ...LKDLSVS | R...TTFNWG | IKVP..... |
| ripr | FVRPISRRNE | VIS.FIKSG. | ...LKDLSIS | R...TTFHWG | IKVP..... |
| plyo | FIQPEKRNNE | ILQ.RLKEP. | ...LEDLSCS | R...TKFTWG | IPVP..... |
| plfa | YIQPEQKRNE | ILQ.RLKEP. | ...LADLSCS | R...TKFTWG | IQVP..... |
| clpel | FIQPESRKNE | MLNNFLRPG. | ...LQDLCVS | R...TSFTWG | IPVS..... |
| clac | FIQPESRKNE | MLNNFLKPG. | ...LQDLCIS | R...SSFDWG | IPIT..... |
| liin | FILPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TTFDWG | IKVP..... |
| limo | FILPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TTFDWG | IKVP..... |
| baan1 | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TSFDWG | VRVP..... |
| bacel | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TSFDWG | VRVP..... |
| basu | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TTFDWG | VKVP..... |
| bast | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TTFDWG | IKVP..... |
| baha | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TSFTWG | VPVP..... |
| enfa | FIQPESRKNE | MLNNFIKPG. | ...LEDLAVS | R...TTFSWG | IPLK..... |
| ocih | FIQPESRKNE | MINNFIKPG. | ...LEDLAVS | R...TTFSWG | VQVP..... |
| stpy | FIQPDGRMNE | MVKNFIEPG. | ...LEDLAVS | R...TTFTWG | VPVP..... |
| stpn | FITPDGRLNE | MLRNFIKPG. | ...LEDLAVS | R...TTFTWG | VPVP..... |
| stmu | FIQPDGRMNE | IKNFIEPG. | ...LEDLAVS | R...TSFTWG | VKVP..... |
| lala | FIQPEVRKNE | MVNNFIKPG. | ...LEDLALT | R...TSFTWG | IPVP..... |
| stau | FIQPPSRKNE | MINNFIKPG. | ...LADLAVS | R...TSFNWG | VHVP..... |
| oeoe | FLQPESRMNE | MISNFIKPG. | ...LEDLALT | R...TSFNWG | IPVP..... |
| thma | FVEPDFRRNE | MLK.ILEGG. | ...LKDLSIT | R...TTFKWG | VPMK..... |
| thth | LIRPEGYRNE | VLA.MLAEP. | ...IGDLSIS | RP.KSRVPWG | IPLP..... |
| dera | LIQPAGYRNE | VLE.MLKED. | ...IGPLSIS | RP.KARVPWG | IPLP..... |
| stco | FVQPESARNE | VVN.FVRQG. | ...LQDLSIS | R...STFDWG | VPVP..... |
| hepyj99 | AILPIYRKNE | VTS.FIEQG. | ...LLDLSIT | R...TSFEWG | IPLPKKM... |
| hepy26695 | AILPVYRKNE | VTS.FIEQG. | ...LLDLSIT | R...TSFEWG | IPLPKKM... |
| caje | PILPKNKNE | LIN.FVQNG. | ...LKDLSIT | R...TSFDWG | IKLPQEI... |
| aqae | FIQPDYRRNE | IIS.FVKQG. | ...LKDLSVT | RP.RSRVKWG | IPVP..F... |
| funu | FILPHSRNE | VIS.FIKQG. | ...LQDLSIS | R...NTFSWG | IPID..... |
| trer | FIQPQSRNE | VLS.FVNQG. | ...LQDFSIS | R...VNVDWA | FKLP..... |
| sy6803 | FIQPSSRRNE | VLN.FVAQG. | ...LQDFSIS | R...VNLDWG | FPLP..... |

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|--------|------------|------------|------------|------------|-----------|
| arth_1 | FVQPSYRLNE | VQS.WIKSG. | ...LRDFSIS | R...ALVDWG | IPVP..... |
| prma | FIQPKERRNE | IIN.FVSKG. | ...LKDFSIS | R...TNVSWG | ISVP..... |
| caelmt | AITPEPFHQA | VLQWLEEE.. | ...LPDLSVS | R.RSSHLHWG | IPVP..... |
| hosamt | AITPEPFHHV | VLQWLDEE.. | ...LPDLSVS | R.RSSHLHWG | IPVP..... |
| tarumt | AIQPERFHHS | VLQWLQEE.. | ...LPDLSVS | R.QKSRLQWG | IPVP..... |
| drmemt | RVRPAKFEKI | LLDTLSEP.. | ...LPDVSVS | R.PSNRVHWA | IPVP..... |
| anga2 | RIQPDKFGRI | LLDWLEEP.. | ...LPDISIS | R.PMNRVSWG | VPVP..... |
| didimt | PIFPAIHVNL | LRYMLSQG.. | ...IKDLSIS | R.PSSRIPWG | IEVP..... |
| caabmt | FIKPKHRYQF | ILKELEDT.K | ...LPDLSIS | R.PSSRLKWS | IEVP..... |
| sacemt | FIFPASKRDQ | ILKELETGGT | ...LPDLSIS | R.PSARLKWG | IPTP..... |
| scpomt | FVQPSIFHTQ | VLEELKTG.. | ...ISDLSIS | R.PKQRLSWG | IPVP..... |
| lema | CIVPEFRRE | VIKTVEKG.. | ...LFDLSIS | RKRESVMNWS | IPVP..... |
| myge | NIIPKSRASE | LKNNFINNG. | ...LNDLALT | R..KN.VTWG | IKVP..... |
| mypn | NITPESRAAE | LKNNFLDGG. | ...LNDLALT | R..QN.VTWG | IPVP..... |
| urur | FIIPNERANE | MVNNFLNN.. | ...LEDLSIS | R..TT.FDWG | IPIA..... |
| mypu | IISSKAIVNE | LKSNFINKG. | ...LENLSVT | R..IK.LDWG | IKID..... |

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|-------|-------------|------------|-----------|------------|--------------|
| mask |**** | ***** | *** | | |
| stpn2 | ..FRDKKIYV | WFEAVAGYYT | ASV...DWA | QKLQ..... |NNIT |
| bace2 | ..YEDKKIYV | WIEAVTGYYT | ASK...HWA | EKTG..... |KDDQ |
| baan2 | ..YEDKKIYV | WIEAVTGYYT | ASK...HWA | EETG..... |KDDR |
| clpe2 | ..FEDKRVYV | WIDALLAYVT | ASK...KVI | EEKG..... |QSLE |
| deet | ...GKRLYV | WFEAVIGYLS | ASI...EWA | ASKG..... | ...QPDEWQ |
| codi | ..NGAKKLYV | WFDVAVGYLS | ASI...EWA | YRTG..... | ...DPEAWK |
| thnw | ...SKRIYV | WFEALIGYIT | GAK...EYS | KRTG..... | ...NPDLWK |
| thvo | ...HKRIYV | WFEALIGYIT | GAK...MFS | EVIG..... | ...KPNYWK |
| pogi | ..AEGKVLVY | WFDAPIGYIS | NTK...ELC | PDS..... |WE |
| bafr | ..AEGKVLVY | WFDAPIGYIS | NTK...ELL | PDS..... |WE |
| cyhu | ..AEGKVLVY | WFDAPIGYIS | AAK...DYF | KNSEIKA... | ..VHKNNTWE |
| chte | ..AKGKVLVY | WFDVAVGYIS | FTK...EWA | EKQG..... | ...DAELWR |
| chmu | ..LENKVIFYV | WFDAPIGYIS | GTM...DWA | ASIG..... | ...DPDAWK |
| chtr | ..LENKVIFYV | WFDAPIGYIS | GTM...DWA | ASIG..... | ...DPEAWK |
| chpn | ..FPGKVFYV | WFDAPIGYIS | GTM...EWA | ASQG..... | ...NPDEWK |
| fugu | .DFKEKVFYV | WFDAPIGYLS | ITA...NYT | DK..... |WE |
| hosa | .GFEDKVFYV | WFDATIGYLS | ITA...NYT | DQ..... |WE |
| anga | .GYEKKVFYV | WFDAPIGYIS | ITS...RYC | KE..... |WK |
| drme | .GFEKKVFYV | WFDAPFGYVS | MTK...RYT | KE..... |YQ |
| sace | .KYKDKVLVY | WFDATIGYVS | ITS...NYT | KE..... |WK |
| scpo | .EFKGVLYV | WFDATIGYIS | ITA...NYT | DE..... |WE |
| didi | .EFKDKVFYV | WFDAPIGYIS | ITA...EYT | NE..... |WE |
| arth | .KYKDKVFYV | WFDAPIGYVS | ITS...CYT | SE..... |WE |
| orsa | .KYKDKVFYV | WFDAPIGYVS | ITA...SYT | PD..... |WE |
| cael | .GFEKKVFYV | WFDAPIGYLS | ITK...CVL | GDN..... |WT |
| encu | .KFKEKVFYV | WFDAPIGYLT | FLK...ELV | GED..... |FG |
| trde | .GFEDKVFYV | WFDAPIGYIS | ITK...CWA | DLAG..... |KDWK |
| trpa | .GFEQKVFYV | WFDAPVGYIS | ITK...CGT | EAASSQEGGG | TDDGVKEKWQ |
| bobu | .GFENKVIFYV | WFDAPIGYIS | ITK...N.. | ..... | ...IKNWE |
| cacr | PGFEEKVFYV | WFDAPIEYIA | ATQ...EWA | EGSP..... | ...DRDWK |
| suto | .GAEGKTIYV | WFEALLGYIS | ATI...EYF | K..... | ..KIGKEEWWK |
| suso | .GAQDKSIYV | WFEALLGYIS | AVI...EYF | E..... | ..RKGDEKWK |
| aepe | .GAEGKTIYV | WFDALLGYVS | ATK...ELF | IM..... | ..RRGDPEEWWK |

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|-------|------------|------------|------------|------------|-------------|
| pyba | .GAEGKTIYV | WFEAVLGYIS | AVV....EYF | K..... | .KIGREEEWK |
| pyho | ..MKNKVLVY | WFEAPIGYIS | ITM....EYF | KRLGKP.... |NEWK |
| pyab | ..MKGKVLVY | WFEAPIGYIS | ITI....EHF | KRIGKP.... |NEWK |
| pyfu | ..MKNKVLVY | WFEAPIGYIS | LTI....EYF | KRIGKP.... |NEWK |
| meja | ...TNQVMYV | WLEAPIGYIS | FT..... | KMLG..... |EIWK |
| meth | ...EGKIIYV | WGEAFLGYIS | SAA....AWS | KKTG..... |RDWR |
| arfu | ...PNLVVYV | WVDAPIGYIS | FTE....KAC | EEKG..... |CDWR |
| hanrc | ...DDLVLVY | WVDAPIEYVA | ATK....QYS | ERVGTEE... |FDWA |
| psfl | ...PGKYFYV | WLDAPIGYMA | SFK....NLC | NRTPE..... |LDFD |
| psae | ...PGKYFYV | WLDAPIGYMA | SFK....NLC | ARRPE..... |LDFD |
| esco | ...PGKYFYV | WLDAPIGYMG | SFK....NLC | DKRGDS.... |VSFD |
| saty | ...PGKYFYV | WLDAPIGYMG | SFK....NLC | DKRGDT.... |TSFD |
| yepe | ...PGKYFYV | WLDAPIGYMG | AFK....NLC | DKRGD..... |LDFD |
| vich | ...KDKFFYV | WLDAPIGYMG | SFK....NLC | DKRGD..... |LDFN |
| haein | ...KDKFFYV | WLDAPIGYMA | SFK....NLC | NRE.G..... |IDFN |
| acac | ...EGKYFYV | WLDAPIGYMA | SFK....NLC | KRESH..... |IDFD |
| pamu | ...EDKYFYV | WLDAPIGYMA | SFK....NLC | DKT.G..... |LNFN |
| neme | ...PGKYFYV | WLDAPVGYMA | SFK....NLC | DRIG..... |VDFD |
| nogo | ...PGKYFYV | WLDAPVGYMA | SFK....NLC | DRIG..... |IDFD |
| xyfa | ...PGKYFYV | WLDAPIGYLC | SFK....TLC | TRIG..... |EDFD |
| buAPS | ...PNKYFYV | WLDAPIGYIS | AFK....NLC | FKSKK..... |LNFN |
| sime | .NDPSHVMYV | WVDALTNVVT | ATG....CL | TDP..... |TGPR |
| agtu | .DDPKHVMYV | WVDALTNVIT | ATG....YI | EDR..... |NGPR |
| brsu | .GDEKHVMYV | WVDALTNVIT | ALG....YP | .DT..... |TDERW |
| melo | .GDDKHVMYV | WVDALTNVIT | AAG....YP | .DT..... |KSDQW |
| rhpa | .GDPEHVMYV | WVDALTNVIS | GVG....FP | .DE..... |NDKNW |
| mytu | .EHPDHVMYV | WVDALTNVLT | GAG....FP | DTD..... |SEFR |
| rhru | .GDEDHVMYV | WLDALTNVIT | AVG....FP | .DQ..... |TGDYA |
| noar | .GCDGHVMYV | WVDALTNVIT | GLG....FP | .DE..... |NGDFA |
| rico | .NNEKHVIYV | WLDALANYIS | ALG....YL | .DE..... |QSNNY |
| ripr | .NNRKHVIYV | WLDALVNYIS | ALG....YP | .DK..... |QSNNYA |
| plyo | .NDPKHVMYV | WMDALINYYS | SCF....IN | ..... | .....NQEKV |
| plfa | .NDPKHVMYV | WMDALINYYS | SCF....ID | ..... | .....EGKK |
| clpel | .FDEKHVIYV | WIDALSNYIT | ALG....YG | QEN..... |QELYK |
| clac | .FDEKHVIYV | WIDALSNYIT | ALG....YG | SDN..... |DELYN |
| liin | .GNPKHVYV | WIDALSNYIT | ALG....YN | TDN..... |DTKFQ |
| limo | .GNPKHVYV | WIDALSNYIT | ALG....YN | TDN..... |DTKFQ |
| baan1 | .GNPKHVIYV | WVDALSNYIT | ALG....YG | TEN..... |EEMYK |
| bacel | .GNPKHVIYV | WVDALSNYIT | ALG....YG | TEN..... |EEMYK |
| basu | .ENPKHVYV | WIDALFNLYT | ALG....YD | TEN..... |DELYQ |
| bast | .GDPKHVIYV | WIDALANYIT | ALG....YG | TDN..... |DEKFR |
| baha | .RDPKHVYV | WIDALSNYIT | ALG....YG | SDQ..... |QEKYE |
| enfa | .NDPKHVYV | WIDALSNYIT | ALG....YG | SED..... |DSLQ |
| ocih | .SNPKHVYV | WIDALTNVIT | ALG....YG | SED..... |TSLYD |
| stpy | .SDPKHVYV | WIDALLNYAT | ALG....YR | QAN..... |HANFD |
| stpn | .SNPKHVYV | WIDALLNYAT | ALG....YA | QDE..... |HGNFD |
| stmu | .SNPKHVYV | WIDALLNYAT | ALG....YG | QDA..... |HANFD |
| lala | .SNPKHVYV | WFDALLNYIT | ALG....YN | SDN..... |DSNFK |
| stau | .SNPKHVYV | WIDALVNYIS | ALG....YL | SDD..... |ESLFN |
| oeoe | .GDEKHVIYV | WIDALSNYIT | ALG....YD | PELGDFD... | ...HQPELFK |
| thma | .DDPEHVIYV | WVDALINYIS | AIG....YG | WND..... |EMFN |
| thth | .WDENHVYV | WFDALLNYVS | ALD....YP | EGE..... |AYR |

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|-----------|-------------|------------|------------|------------|-------------|
| dera | .WDTDHVITYV | WFDALLSYLT | PLV.....SQ | GQD..... |AS. |
| stco | .WDDKHVIYV | WVDALLNYAT | AVG.....YN | ENP..... |EKFE |
| hepyj99 | .NDPKHVYV | WLDALLNYAS | ALG.....YL | NGL..... |DNKM |
| hepy26695 | .NDPKHVYV | WLDALLNYAS | ALG.....YL | NDL..... |DNKM |
| caje | .NDDKHIIYV | WLDALFIYVS | SLD.....FQ | NKG..... |EN.A |
| aqae | .DPEHTIYV | WFDALFNYIS | AL..... | .E..... |DKVE |
| funu | .FAPGHITYV | WFDALTNYIT | SAG.....FE | NDE..... |NKFD |
| trrer | .VDSSTIYV | WFDALLGYVT | ALL.....DP | DSEPT..... |LENALS |
| sy6803 | .NDPNHTIYV | WFDALLGYVT | ALL.....DE | DEEPN..... |LTNALV |
| arth_1 | .DDDKQTIYV | WFDALLGYIS | ALT.....ED | NKQON..... |LETAVS |
| prma | .DIDNHTFYV | WFDALLGYVS | AIS.....LD | MKEPS..... |LDESID |
| caelmt | .GDDSQTIYV | WLDALVNYLT | VVG.....YP | DA..... |DFK |
| hosamt | .GDDSQTIYV | WLDALVNYLT | VIG.....YP | NA..... |EFK |
| tarumt | .EDDGQTIYV | WLDALVNYLT | VVG.....YP | N..... |NHE |
| drmemt | .DDDSQTVYV | WLDALVNYLS | SVG.....YP | DE..... |KFS |
| anga2 | .SDPSQSVYV | WLDALVNYLT | VAG.....YP | KE..... |SFR |
| didimt | .NDPSQTIYV | WLDALTNYLT | VTG.....YP | NVS.P..... | ...N...SSQ |
| caabmt | .NDSTQKIYV | WFDALLNYLT | AT.....KFP | HGF.E..... | ...VQDSKFFV |
| sacemt | .NDPSQKVYV | WFDALCNYLS | SIGGIPSILS | NAT.E..... | ...VVS RHYS |
| scpomt | .GNSQQTIYV | WLDALINYIS | VIG.....YP | WLN.E..... | ...K.SSLSA |
| lema | .GDERHCIYV | WLDALFNYYT | GALTR..VAT | DGT.E..... | ...TLDEDHH |
| myge | .FDPNQTIYV | WFDALFSYIT | NLG.....FR | ..... | ...NGDPNFI |
| mypn | .FDNKQTIYV | WFDALFNYYT | NLG.....FA | ..... | ...HNDPKFN |
| urur | .ENPKHVIYV | WLDALMNYLT | ATG.....YL | S..... | ...NNEELFQ |
| mypu | .QSSKHVIYV | WLDALFQYLT | NLG.....YG | S..... | ...KNQSLYE |

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650

| | | | | | |
|-------|--------|-------------|------------|-------------|-------------|
| mask | | |** | ***** | *****. |
| stpn2 | D..... | .FWNN..... | .R..TKSYY | VHGKDNIPFH | TIIWPAILSG |
| bace2 | E..... | .FWDR..... | .E..AKTY | VHGKDNIPFH | SIIWPAVLLG |
| baan2 | E..... | .FWDG..... | .E..AKTY | VHGKDNIPFH | SVIWPAVLLG |
| clpe2 | E..... | .YWNNE..... | .D..SRIYL | VHGKENIPFH | TTMFPAILSG |
| deet | K..... | .YWGG..... | .D..TKSYY | FIGKDNIPFH | TIIWPAMLMG |
| codi | K..... | .WWNDP..... | .E..SSGY | FMGKDNITFH | SQIWP AELLG |
| thnw | E..... | .YYMDP..... | .E..VRNYY | FIGKDNIPFH | AIWPAAMLMG |
| thvo | E..... | .FYFDK..... | .D..VKNY | FIGKDNIPFH | SIIWPAAMLLG |
| pogi | T..... | .WWKSE..... | .D..TRLVH | FIGKDNIVFH | CIVFPAML.. |
| bafr | T..... | .WWKDP..... | .E..TRLVH | FIGKDNIVFH | CIVFPAML.. |
| cyhu | D..... | .FWKKD..... | .D..TKLVH | FIGKDNIVFH | CIIFPAML.. |
| chte | R..... | .YWQDP..... | .E..TRIIN | FIGKDNVVFH | TLMFPAILMA |
| chmu | K..... | .FWLDD..... | .K..VTYTQ | FVGKDNVTSFH | SVIFPAMEMG |
| chtr | K..... | .FWLDD..... | .T..VTYAQ | FIGKDNVTSFH | AAIFPAMEIG |
| chpn | R..... | .FWLED..... | .G..VEYVQ | FIGKDNLPFH | SVVFPAMELG |
| fugu | K..... | .WWKN..... | PPQ..VELYN | FMAKDNVPFH | SVVFP CSLLG |
| hosa | R..... | .WWKN..... | PEQ..VDLYQ | FMAKDNVPFH | SLVFP CSALG |
| anga | Q..... | .WWQPDTANT | GVK..VDLYQ | FMAKDNVPFH | SVMFPASLLA |
| drme | Q..... | .WWQP...AK | GTD..VELFQ | FMAKDNVPFH | SVVWPSVLLA |
| sace | Q..... | .WWNN..... | PEH..VSLYQ | FMGKDNVPFH | TVVFP GSQLG |
| scpo | K..... | .WWRN..... | PEQ..VKLYQ | FMGKDNVPFH | TVIFP SLLG |
| didi | K..... | .WWKN..... | PEN..VKLVK | LMGKDNVHFN | KVIFPASLIG |
| arth | K..... | .WWKN..... | PEN..VELYQ | FMGKDNVPFH | TVMFPSTQLG |
| orsa | K..... | .WWKD..... | PDN..VELFQ | FMGKDNVPFH | TVMFPSTLLG |

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|-------|--------|-------------|------------|------------|------------|
| cael | K..... | .WWKN..... | PEN..VELFN | FVGKDNVAFH | AVMFPCSQLG |
| encu | E..... | .WCKD..... |AELVQ | FMGKDNVAFH | TVIFPAMLYA |
| trde | A..... | .WWLD..... | QND..VELFQ | FIGKDNIPFH | TVIFPCSLIG |
| trpa | S..... | .WWLD..... | QQD..VELVQ | FVGKDNIPFH | TLFFPCMLIG |
| bobu | S..... | .WWKN..... | NDQ..VNLVQ | FIGKDNILFH | TIIFPCIEIG |
| cacr | R..... | .WWRTDAG.. | ADD..VRYVQ | FMGKDNVAFH | TVSFPATILG |
| suto | K..... | .FWFG..... | .ND..VKSYY | FIGKDNIPFH | AVILPAMLMA |
| suso | E..... | .YWFG..... | .PN..IKSYY | FIGKDNIPFH | AVILPAMLMA |
| aepe | S..... | .WWWD..... | .SG..TRTVY | FIGKDNIPFH | AIILPALFLA |
| pyba | R..... | .FWLD..... | .PE..TKVVF | FVGKDNVPFH | VIILPALLLA |
| pyho | K..... | .YWLNI..... | ..DSETRVIH | FIGKDNIPFH | AIFWPAFLMA |
| pyab | K..... | .YWLNI..... | ..DGQTRVIH | FIGKDNIPFH | AIFWPAFLMA |
| pyfu | K..... | .YWLNL..... | ..DGQTRVIH | FIGKDNIPFH | AIFWPAFLMA |
| meja | K..... | .YWLEK..... | ..D..TKIYH | FIGKDITVHH | AVFWPGMLIA |
| meth | E..... | .YW..... | ..D..SGAIH | FIGKDIIYHH | AIFWPALLMA |
| arfu | K..... | .IWIDG..... | ..D..AEIIH | FIGLDIVYHH | CIFWPAMLKG |
| hanrc | S..... | .VWKDG..... | ..D..GEIIH | VIGRDIIQHH | TVFWPSMLAG |
| psfl | A..... | .FWGK..... | .DST.AELYH | FIGKDIVNFH | ALFWPAMLEG |
| psae | A..... | .FWGK..... | .DSG.AELYH | FIGKDIVNFH | ALFCPAMLEG |
| esco | E..... | .YWKK..... | .DST.AELYH | FIGKDIVYFH | SLFWPAMLEG |
| saty | E..... | .YWKK..... | .DSD.AELYH | FIGKDIVYFH | SLFWPAMLEG |
| yepe | E..... | .FWGK..... | .DXK.TDXYX | FIGKDIVYFH | SLFWPAMLEG |
| vich | E..... | .YWNK..... | .DSK.TELYH | FIGKDIVYFH | SLFWPAMLDG |
| haein | E..... | .FWAE..... | .GSD.AELYH | FIGKDIVYFH | SLFWPAMLEG |
| acac | G..... | .FWRK..... | .DSD.AELYH | FIGKDIMYFH | SLFWPAMLEG |
| pamu | D..... | .FWKK..... | .DSS.AELYH | FIGKDIVYFH | SLFWPAMLDG |
| neme | E..... | .YFKA..... | .DSQ.TEMYH | FIGKDILYFH | ALFWPAMLHF |
| nogo | E..... | .YFKA..... | .DSQ.TEMYH | FIGKDILYFH | ALFWPAMLHF |
| xyfa | T..... | .HLRS..... | .GTT.TELHH | FIGKDIVNFH | ALFWPAVLHG |
| buAPS | E..... | .LWNQ..... | .NSN.YELYH | FIGKDIIYFH | TLFWPAILEA |
| sime | K..... | .FWPAN..... |IH | VIGKDIIRFH | AVYWPAFLMS |
| agtu | K..... | .YWPAD..... |VH | IIGKDIIRFH | AVYWPAFLMS |
| brsu | A..... | .YWPAN..... |AH | IIGKDISRFH | AVYWPAFLMS |
| melo | R..... | .YWPA..... |TH | IIGKDIVRFH | AVYWPAFLMS |
| rhpa | H..... | .YWPAD..... |VH | VIGKDIIRFH | AVYWPAFLMS |
| mytu | R..... | .YWPAD..... |LH | MIGKDIIRFH | AVYWPAFLMS |
| rhru | R..... | .YWPAN..... |LH | MVGKDILRFH | TVYWPAFLMA |
| noar | K..... | .YWPAN..... |LH | LIGKDIVRFH | TVYWPAFLMS |
| rico | K..... | .FWPAD..... |LH | VVGKDILRFH | AVYWPAFLMA |
| ripr | K..... | .FWPAN..... |LQ | IVGKDILRFH | AVYWPAFLMA |
| plyo | K..... | .YWPAD..... |IH | IIGKDIVWFH | AVIFPTILMS |
| plfa | K..... | .YWPAN..... |VH | IIGKDITWFH | TVIFPTILLS |
| clpel | K..... | .FWPAD..... |VH | LIGKDILRFH | TIYWPIMLMA |
| clac | K..... | .FWPAD..... |LH | LVGKDIIRFH | TIYWPIMLMA |
| liin | K..... | .YWPAD..... |VQ | IVGKEIVRFH | TIYWPIMLMA |
| limo | K..... | .YWPAD..... |VQ | IVGKEIVRFH | TIYWPIMLMA |
| baan1 | K..... | .FWPAD..... |VH | LVGKEIVRFH | TIYWPIILMA |
| bacel | K..... | .FWPAD..... |VH | LVGKEIVRFH | TIYWPIILMA |
| basu | K..... | .YWPAD..... |VH | LVGKEIVRFH | TIYWPIMLMA |
| bast | K..... | .YWPAD..... |VH | LVGKEIVRFH | TIYWPIMLMA |
| baha | N..... | .YWPAD..... |VH | LVGKEIVRFH | TIYWPIMLMA |
| enfa | K..... | .YWPAN..... |VQ | MVGKEIVRFH | TIYWPIMLMA |

| | | | | | |
|-----------|------------|------------|------------|------------|------------|
| ocih | K..... | .FWPAD.... |VH | MVGKEIVRFH | TIYWPIMLMA |
| stpy | K..... | .FWNGTV... |FH | MVGKDILRFH | SIYWPILLMM |
| stpn | K..... | .FWNGTV... |FH | MVGKDILRFH | SIYWPILLMM |
| stmu | K..... | .FWNGTV... |FH | MVGKDILRFH | SIYWPILLMM |
| lala | K..... | .YWPG..... |IN | MVGKEIVRFH | TIYWPIMLHA |
| stau | K..... | .YWPAD.... |IH | LMAKEIVRFH | SIIWPILLMA |
| oeoe | K..... | .FWPAN.... |LQ | LVGKEIVRFH | TIYWPIMLHA |
| thma | K..... | .WWPAD.... |LH | LIGKEINRFH | SIIWPAMLS |
| thth | T..... | .FWPHA.... |WH | LIGKDILKPH | AVFWPTMLKA |
| dera | ..... | .MSGKA.... |WH | VIGKDILKPH | AVFWPTMLRA |
| stco | S..... | .TFPAD.... |VH | LVGKDILRFH | AIIWPAFLMS |
| hepyj99 | A..... | .HFERA.... |RH | IVGKDILRFH | AIYWPFLMS |
| hepy26695 | A..... | .HFECA.... |RH | IVGKDILRFH | AIYWPFLMS |
| caje | K..... | .FWPAH.... |VH | LVGKDILRFH | AIYWPFLMS |
| aqae | I..... | .YWPAD.... |LH | LVGKDILRFH | TVYWPFLMS |
| funu | K..... | .FWNNSR... |VVH | LIGKDIIRFH | AIIWPCMLLS |
| trrer | K..... | .WWPIN.... |LH | LIGKDILRFH | AVYWPAMLS |
| sy6803 | K..... | .WWPIN.... |LH | LIGKDILRFH | AVYWPAMLS |
| arth_1 | F..... | .GWPAS.... |LH | LIGKDILRFH | AVYWPAMLS |
| prma | N..... | .GWPAD.... |IH | LIGKDILRFH | AVYWPAMLS |
| caelmt | S..... | .WWPAT.... |SH | IIGKDILKFH | AIYWPALLLG |
| hosamt | S..... | .WWPAT.... |SH | IIGKDILKFH | AIYWPALLLG |
| tarumt | R..... | .WWNVA.... |HH | IIGKDILKFH | AIYWPSFLLG |
| drmemt | A..... | .HWPPA.... |QQ | VIGKDILKFH | GIYWTAFLLA |
| anga2 | T..... | .RWPPT.... |VQ | VLGKDILKFH | GIYWPALLA |
| didimt | S..... | .HWSNA.... |TH | IIGKDIKFH | SVYWPSFLIA |
| caabmt | T.....PEN | SIWPA.... |TH | VIGKDIIRFH | CIYWPIFLMA |
| sacemt | DKSNVKGQLL | IPYPKEV... |QRNTIH | VIGKDIKFH | TVYWPSFLLA |
| scpomt | G..... | ..WPAN.... |MH | VIGKDIIRFH | CIYWPFLMA |
| lema | ALN..... | .RWPAD.... |VH | VVGKDILKFH | AIYWPFLMS |
| myge | K..... | .WWNNDNK.. |EREVIH | LISREITRFH | CIYWPIFLHL |
| mypn | K..... | .WWNNNDE.. |EHEVIH | LISREITRFH | CIYWPIFLHQ |
| urur | K..... | .YWCDN.... |ETEIVH | LLSKEIARFH | CIYWPIFLND |
| mypu | K..... | .FWKNG.... |DERVH | VVGKEITRFH | CIYWPIFLKS |

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|-------|------------|------------|------------|------------|------------|
| mask | |* | ***** | *..... | ***** |
| stpn2 | | ...LEIEPLP | EYIISSEYLT | L.ENKKISTS | NNWAIWLNDI |
| bace2 | | ...IGEGTIP | RHIVSNEYLT | V.EKRKLSTS | KNWAVVVPDI |
| baan2 | ..... | ...IGEGTIP | RHIVSNEYLT | V.EKRKLSTS | KNWAVVVPDI |
| clpe2 | ..... | ...IGLEKSE | IRIFSSQYLT | L.EGKTFSTN | RNWAIWVPYI |
| deet | RGG..... |LDLP | YDVPSNEYLT | I.EAQKFSKS | RNKAIWVDDV |
| codi | YQGKGAKAGS | VHSLGELNLP | TEVVSSEFLT | M.SGSKFSSS | KGIVYVKDF |
| thnw | YGG..... |FNLP | YDIPANEYLT | F.KGQQFSKS | RGIGYSVDDL |
| thvo | YGE..... |LNLP | YDIPANEYLT | F.KGEQFSKS | RGIGYTVDEL |
| pogi | ..... | .RAEGSFILP | DNVPANEFLN | L.EGDKISTS | RNWAVWLHEY |
| bafr | ..... | .KAEGSYILP | DNVPSNEFLN | L.EGDKISTS | RNWAVWLHEY |
| cyhu | ..... | .KAEGSYILP | DNVPANEFMN | L.EGDKISTS | RNWAVWLHEY |
| chte | WNEG..... | .RSEGRYELA | DNVPASEFMN | F.EGRKFSKS | RNYAVYLGEF |
| chmu | ..... | ..QSLPYKKV | DALVTSEFLL | L.EGFQFSKS | EGNIIDMDAF |
| chtr | | ..QSLPYKKV | DALVTSEFLL | L.EGFQFSKS | DGNFIDMDAF |
| chpn | | ..QKLDYKKV | DALVVSEFYL | L.EGRQFSKS | EGNYVDMDF |

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|-------|-----------|-------------|------------|------------|------------|
| fugu | | ..AQDNYTLV | NHLVATEYLN | Y.EDTKFSKS | RGVGVFGDMA |
| hosa | | ..AEDNYTLV | SHLIATEYLN | Y.EDGKFSKS | RGVGVFGDMA |
| anga | ..... | ..VDKGYTLV | SHVMATEYLN | Y.EDGKFSKS | RGIGVFGNDA |
| drme | ..... | ..INKGHTLV | SHIMATEYLN | Y.EDGKFSKS | RGIGVFGNDA |
| sace | ..... | ..TEENWTML | HHLNTTEYLQ | Y.ENGKFSKS | RGVGVFGNNA |
| scpo | ..... | ..TGEKWTML | HHINTTDYLN | Y.ETGKFSKS | RGVGVFGNTA |
| didi | ..... | ..SKDNYTLL | NNLSATEFLN | Y.ETGKFSKS | RNTGVFGDGA |
| arth | ..... | ..TEENWTLM | KTISVTEYLN | Y.EDGKFSKS | KGVGVFGNDV |
| orsa | ..... | ..TGEKWTMM | KTISVTEYLN | Y.EAGKFSKS | HGIGVFGNDA |
| cael | ..... | ..ANDNYTVV | NNLCATEYLN | Y.EDTKFSKS | RGTGIFGDAA |
| encu | ..... | ..TGEKYPVV | RRLSATEYLQ | F.ENEKFSKS | RRHGIFGLDL |
| trde | ..... | ..SGKNWTKL | FHMSGTEYLN | Y.ENGKFSKS | KGVGVFGNDA |
| trpa | ..... | ..SGQRWTML | TRLSATEYLN | Y.EGGKFSKS | LGVGVFGSDA |
| bobu | ..... | ..SEENWTIL | NQLSSSEYLN | Y.ENLKFSKS | EGTGIFGNDA |
| cacr | ..... | ..SEEPWKS | DMLKAFNWLN | W.YGGKFSTS | NKRGVFMDDA |
| suto | ..... | ..SGENYVLP | TVIAATEYLL | Y.EGQKFSKS | RKIGVWIDEA |
| suso | ..... | ..SEEEYHLP | DVIAATEYLL | Y.EGQKFSKS | RKIGVWIDEA |
| aepe | ..... | ..SHDPYVLP | WRISATEYLM | Y.EGQQFSKS | RRIGVWIDEA |
| pyba | ..... | ..NGGGYVMP | TTTASTEYLL | Y.EGDKFSKS | RRWGVWIDEA |
| pyho | YGKY...KD | EEVEAEWNLP | YDIPANEYLT | L.EGKKFSTS | RNWAIVVHE. |
| pyab | YGKY...KD | EEVEAEWNLP | YDIPANEYLT | L.EGKKFSTS | RNWAIVVHE. |
| pyfu | YGKY...KD | EEVEAEWNLP | YDIPANEYLT | L.EGKKFSTS | RNWAIVIHE. |
| meja | HG..... |SFNLP | TAVVSGGYLT | L.EGRKMSTS | KRWVWVKD. |
| meth | YG..... |CRTP | ANIIAGEYLS | L.EGQKMSTS | KNWVWVWTS. |
| arfu | AD..... |YALP | SAVVASGMVK | V.EGKTFSTS | RGYVWVVEED |
| hanrc | AD..... |YAEP | RAVCATGFVN | I.DGRGLSTS | KNRAIWAAE. |
| psfl | ..... | .....AGFRKP | TGINVHGYLE | V.NGQKMSKS | RGTFIKARTY |
| psae | ..... | .....AGYRKP | TALNVHGYLE | V.NGQKMSKS | RGTFVKARTY |
| esco | ..... | .....SNFRKP | SNLNVHGYLE | V.NGAKMSKS | RGTFIKASTW |
| saty | ..... | .....SHFRKP | TNLNVHGYLE | V.NGAKMSKS | RGTFIKASTW |
| yepe | ..... | .....SNFRKP | TNLNVHGYLE | V.NGAKMSKS | RGTFIKAGTY |
| vich | ..... | .....SGFRKP | TNVFVHGYLE | V.NGAKMSKS | KGTFVKASTY |
| haein | ..... | .....SGYRKP | TNVFAHGYLE | V.DGAKMSKS | RGTFIQASTY |
| acac | ..... | .....ADFRKP | SNLNVHGYLE | V.NGKMSKS | RGTFIQAATY |
| pamu | ..... | .....CDLRKP | TNVFAHGYLE | V.NGVKMSKS | RGTFIQASTY |
| neme | ..... | .....SGHRAP | TGVYAHGFLT | V.DGQKMSKS | RGTFITAKSY |
| nogo | ..... | .....SGHRAP | TGVYAHGFLT | V.DGQKMSKS | RGTFITAKSY |
| xyfa | ..... | .....TGHRAP | TRLNVHGYLE | V.DGAKMSKS | RGTFIMARTY |
| buAPS | ..... | .....VSFRQP | SGIFVHGHLT | M.NGLKLSKS | RGALIKASDW |
| sime | ..... | .....AGLPLP | KRVFAHGFL | N.KGEKMSKS | LGNVVDPFNL |
| agtu | ..... | .....AKLPLP | KRVYAHGFL | N.KGEKMSKS | LGNVVDPANL |
| brsu | ..... | .....AQLPLP | KRVFAHGFL | N.RGEKMSKS | VGNVIDPFEL |
| melo | ..... | .....AGIELP | KRVFAHGFL | N.RGEKMSKS | VGNVDPFAL |
| rhpa | ..... | .....AGIPVQ | KRVYAHGFL | N.KGEKMSKS | VGNIVDPFNL |
| mytu | ..... | .....AGIELP | RRIFAHGFL | N.RGEKMSKS | VGNIVDPVAL |
| rhru | ..... | .....AGLEVP | GRVFAHGWT | N.EGQKISKS | VGNVIDPRAL |
| noar | ..... | .....ADIALP | RQVFGHGFL | N.RGQKESKS | LGNTIDPLDL |
| rico | ..... | .....AEVPLP | KTIMAHGWT | N.EGQKISKS | LGNTIDPIKL |
| ripr | ..... | .....AEIPLP | KAIMVHGWT | N.EGQKISKS | LGNTIDPITL |
| plyo | ..... | .....ANIPLP | KCVFVSHGFL | AGDGKMSKS | LKNVIDPKEI |
| plfa | |ANIPLS | KSVFVSHGFL | AADGKMSKS | LGNVINPLEI |
| clpel | |LGLELP | KQVFGHGWLL | VDGG.KMSKS | KGNVVDPVVL |

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|-----------|-------|------------|------------|-------------|------------|
| clac | |LDLPLP | KQVFGHGWLL | VDGG.KMSKS | KGNVDPVVL |
| liin | |LDLPLP | KMVFGHWIL | MKDG.KMSKS | KGNVDPYML |
| limo | ..... | ....LDLPLP | KMVFGHWIL | MKDG.KMSKS | KGNVDPYML |
| baan1 | ..... | ....LDLPLP | KKVFAHWIL | MKDG.KMSKS | KGNVDPVIL |
| bacel | ..... | ....LDLPLP | KKVFAHWIL | MKDG.KMSKS | KGNVDPVTL |
| basu | ..... | ....LDLPLP | KQVFAHWLL | MKDG.KMSKS | KGNVDPVTL |
| bast | ..... | ....LGLPLP | KKVFGHGWLL | MKDG.KMSKS | KGNVDPVMI |
| baha | ..... | ....LDLPLP | KKVFGHGWLL | MKDG.KMSKS | KGNVDPVPL |
| enfa | ..... | ....LDLPLP | KKVFGHGWLL | MKDG.KMSKS | KGNVYPEML |
| ocih | ..... | ....LDLPLP | KKVFAHWLL | MKDG.KMSKS | KGNVYPEML |
| stpy | ..... | ....LDLPMP | DRLIAHGFV | MKDG.KMSKS | KGNVYPEML |
| stpn | ..... | ....LDVKLP | DRLIAHGFV | MKDG.KMSKS | KGNVYPEML |
| stmu | ..... | ....LDLKMP | ERLIAHGFV | MKDG.KMSKS | KGNVYPEML |
| lala | ..... | ....LGLPAP | KKIFAHWLL | MKDG.KMSKS | KGNVYPEML |
| stau | ..... | ....LDLPLP | KKVFAHWIL | MKDG.KMSKS | KGNVDPNIL |
| oeoe | ..... | ....LGLPLP | GEVLGHGWL | MKNG.KMSKS | KGNVYPETL |
| thma | ..... | ....VGLPLP | KKVFAHWLT | VNGQ.KISKS | LGNAIDPRFF |
| thth | ..... | ....AGIPMY | RHLNVGGFLL | GPDGRKMSKT | LGNVDPFAL |
| dera | ..... | ....AGLPLY | RRLVVHSHIL | AEDGRKMGKS | LGNAIDPEEL |
| stco | ..... | ....QGLPLP | GKIAANGWLM | V.GGEKMSKS | NLTGIKPQDL |
| hepyj99 | ..... | ....LNLPLF | KQLCVHGWWT | I.EGVKMSKS | LGNVLDAQKL |
| hepy26695 | ..... | ....LNLPLF | KQLCVHGWWT | I.EGVKMSKS | LGNVLDAQKI |
| caje | ..... | ....VDLPLP | KFIGAHGWWT | K.EGEKMSKS | KGNVVKPKEV |
| aqae | ..... | ....LGYELP | KKVFAHWWT | V.EGKKMSKT | LGNVDPYEV |
| funu | ..... | ....AGIKLP | DSIVAHWWT | S.EGEKMSKS | RGNVNPYDE |
| trrer | ..... | ....ADLPLP | ERVFGHGFLT | K.DGKKMGKS | LNNTLDPFEL |
| sy6803 | ..... | ....AELAIP | AQVFGHGFLT | K.DGQKMGKS | LGNTVDPLDL |
| arth_1 | ..... | ....AGLELP | KMVFGHGFLT | K.DGMKMGKS | LGNTLEPFEL |
| prma | ..... | ....AGMKVP | KKVYGHGFLT | R.EGQKMGKS | LGNVLDPDIL |
| caelmt | ..... | ....AGLRPP | HRIYVHSHWT | V.SGQKMSKS | LGNVDPRTC |
| hosamt | ..... | ....AGMSPP | QRICVHSHWT | V.CGQKMSKS | LGNVDPRTC |
| tarumt | ..... | ....AGLPLP | QTIHVHSHWT | V.AGKKMSKS | LGNVDPQER |
| drmemt | ..... | ....AGLEPP | GQLYVHSHWT | V.DGQKMSKS | KHNVDPLOA |
| anga2 | ..... | ....AQIEPP | RQLLVHSHWT | V.DNQKMSKS | KQNVDPNER |
| didimt | ..... | ....ADYPLP | KSIICAHWT | V.NREKMSKS | RGNVDPFLA |
| caabmt | ..... | ....AGIELP | KQVIVHSHWL | C.DGFKMSKS | LGNLVDPMEI |
| sacemt | ..... | ....AGLPLP | RQIVVGHHL | C.NGMKMSKS | LGNVDPIDM |
| scpomt | ..... | ....AGLPLP | EKILVHSHWT | M.NKVKMSKS | LGNVDPFWL |
| lema | ..... | ....AELPLP | ERLVSHGWWT | K.DHKKISKS | LGNAFDPVEK |
| myge | ..... | ....LDIKLP | TQFLSHGWIV | DGEGRKMSKS | LNNVISPEQL |
| mypn | ..... | ....LGFKLP | TQFLSHGWIV | DGNHGMKMSKS | LGNVISPEEL |
| urur | |LQIRFP | STILSHGWII | TKEG.KMSKS | LGNVDPNVL |
| mypu | |LNVKMP | TKIISHGWIV | TPEG.KMSKS | KGNVDPVVL |

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|-------|------------|------------|------------|------------|------------|
| mask |** | ***** | ***** | ***** | ***** |
| stpn2 | IKKYDA..DS | IRYFLTINAP | EMK.DANFSW | REFIYSHNSE | LLGSYGNFIN |
| bace2 | LERYDP..DS | IRYFLTVNAP | ENR.DTDFSW | REFIYSHNSE | LLGAYGNFVN |
| baan2 | LERYDP..DS | IRYFLIVNAP | ENR.DTDFSW | REFIYSHNSE | LLGAYGNFVN |
| clpe2 | MERYNI..DS | IRYYLISRGA | EEK.NSDFTW | RDFINANNNE | LVGEIGNFTN |
| deet | LSRYS..VDT | LRYLLSANMP | ESS.DMDFSW | REFVRRNDE | LVATYGNLAQ |
| codi | LKEFG..ADP | LRYFIAVAGP | ENN.DTDFTW | DEFVRRVNNE | LANGWGNLVN |

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|-------|-------------|-------------|------------|------------|------------|
| thnw | LKAVP..ADY | LRYVVASILP | ETG.DSDFSL | EELVNTVNSD | LIDKYGNLVY |
| thvo | LRVIP..PDY | LRYVVASILP | ETG.DSDFSL | EELVKTVNSD | LIDKYGNFVH |
| pogi | LEEFPGKQDV | LRYVLTANAP | ETK.DNDFTW | RDFQARNNNE | LVAIFGNFVN |
| bafr | LEDFPGKQDV | LRYVLTANAP | ETK.DNDFTW | KDFQARNNNE | LVAVYGNFVN |
| cyhu | LEEFKGGKQDV | LRYALCANAP | ETK.DNDFTW | RDFQARNNNE | LVAIYGNFVN |
| chte | LERFP..ADT | LRYSIAMNYP | ENK.DTDFSW | SDFQNRNNGE | LADTLGNFIK |
| chmu | LETYS..LDK | LRYVLAAIAP | ETS.DSEFAF | QEFKTRCNSE | LVGKFGNFVN |
| chtr | LETYS..LDK | LRYVLAAIAP | ETS.DSEFSF | QEFKTRCNSE | LVGKYGNFVN |
| chpn | LSSYS..LDK | LRYVLAATAP | ETS.DSEFTF | LDFKTRCNSE | LVGKFGNFVN |
| fugu | KETDIP.CDV | WRFYLLYVRP | EGQ.DSSFSW | ADLATKNNSE | LLNNLGNFIN |
| hosa | QDTGIP.ADI | WRFYLLYIRP | EGQ.DSAFSW | TDLLLKNNSE | LLNNLGNFIN |
| anga | QDTGIP.ADV | WRFYLGAAAP | EGQ.DSSFSW | SDLQARNNNE | LLKNLGNFFN |
| drme | QETGIP.ADV | WRFYLASARP | EGQ.DSSFSW | NDLAARNNNE | LLNNLGNFVN |
| sace | QDSGIS.PSV | WRYYLASVRP | ESS.DSHFSW | DDFVARNNSE | LLANLGNFVN |
| scpo | QDIGLS.PSV | WRYYLLSSRP | ETS.DTMFTW | KEFITRHNSE | LLANLGNFVN |
| didi | KATGIP.SEV | WRFYLLNNRP | ESS.DSIFSW | DDFNFKNN.E | LLNNFGNLVN |
| arth | KDTNIP.VEV | WRYYLLTNRP | EVS.DTSFSW | TDLQAKLNSE | LLSNLGNFVN |
| orsa | KDTNIP.PEV | WRYYLLTNRP | EVS.DTLFTW | ADLQAKLNSE | LLNNLGNFIN |
| cael | QGTEIP.ADI | WRFYLLYMRP | ESQ.DTAFSW | DDFVLKVNSE | LLNNLGNFIN |
| encu | VGGGLGKSCM | WRYYLLKIRP | ESTKDSNFTF | SDFRQSVTAD | LINNLGNFVN |
| trde | KESGIP.ADM | WRFYIFYNRP | EKN.DTQFTW | KDFQERVNSE | LIGNLGNLVN |
| trpa | KESGIP.SDL | WRFYLLYHRP | EKS.DAHFTW | HEFQERVNSE | LIGNLGNLVN |
| bobu | ITTGIP.SDI | WRFYIYNNRP | EKS.DFQFMW | QDLMERVNTE | LIDNFSNLVN |
| cacr | LEILPP..DL | WRWYLTANSP | EGS.DTAFWT | EQFASAVNRD | LADVLGNFVN |
| suto | PQLLDI..EY | WRFILIRLRP | EER.DTNFTW | REALRIVNTE | LNDDIGNYAN |
| suso | PELMDV..EY | WRFVLIRLRP | EEK.DTNFTW | RETVRIVNTE | LNDDIGNYVN |
| aepe | LEIAPA..DY | WRWALARMRP | EAR.DTNFTW | KEYRIVNTE | LNDDIGNFVN |
| pyba | LQLLPA..DY | WRFVLIYIRP | ENR.DTNFSW | STALEIINKV | LNDDVGNYAN |
| pyho | FLDV.FPADY | LRYYLTTIMP | ETR.DSDFSF | AEFKTRINEE | LVNNLGNFVH |
| pyab | FLDV.FPADY | LRYYLTTIMP | ETR.DSDFSF | SDFKVRINEE | LVNNLGNFVH |
| pyfu | FLDV.FPADY | LRYYLTSIMP | ETR.DSDFSF | AEFKTKINEE | LVNVLGNFVY |
| meja | FVKN.FDADY | LRYYLIMSAP | LFK.DCDFSF | DDFKNKINNE | LINIIGNFTH |
| meth | FLER.FDRDL | LRYYLTVNAP | LTR.DTDFSW | DDFQRRVNDE | LADVLGNFLH |
| arfu | YLKSGLSPDY | LRYYIVNYTS | HQK.DLNFSW | EVFREKVNNE | VIATLGNFLY |
| hanrc | YLDAGFHPDL | LRYYLATASG | FER.DVNFSW | AEFAQRVNTE | LADAVGNFAY |
| psfl | LDH..LSPEY | LRYYYAAKLG | RGVDDLNL | EDFVQKVNSD | LVGKVVNIAS |
| psae | LDH..LDPEY | LRYYYASKLG | RGVEDLNL | EDFVQKVNSD | LVGKVVNIAS |
| esco | LNH..FDADS | LRYYYTAKLS | SRIDDIDLNL | EDFVQRVNAD | IVNKVVNLAS |
| saty | LKH..FDADS | LRYYYTAKLS | SRIDDIDLNL | EDFVQRVNAD | IVNKVVNLAS |
| yepe | LKY..LDADC | LRYYYAAKLS | SRIDDIDLNL | EDXVQRVNAD | IVNKVVNLAS |
| vich | LNH..LDPEC | LRYYYAAKLN | NRIDDIDLNL | EDFTQRVNAD | VVNKIVNLAS |
| haein | LNH..IDPEC | LRYYYAAKLN | DRIEDLDFNL | EDFVQRVNTD | IVNKLVNLAS |
| acac | LKY..LDPEC | LRYYYAAKLS | NRIDDIDLNL | EDFVQRVNTD | LVNKLVNLAS |
| pamu | LRH..LAPEY | LRYYYAAKLN | NRIEDLDFNL | EDFVQRLNAD | VVNKFVNLAS |
| neme | LEQG.LNPEW | MRYYYIAAKLN | SKIEDIDLNL | QDFISRVNSD | LVGKYVNIAA |
| nogo | LEQG.LNPEW | MRYYYIAAKLN | GKIEDIDLNL | QDFISRVNSD | LVGKYVNIAA |
| xyfa | LDAG.LEPDA | LRYYYFAAKSS | GDVDDLNL | SDFVARVNAD | LVGKLVNLAS |
| buAPS | IQY..FSDSD | LRYYYASKLS | NKTHDIEINL | EDFIQKINS | IVNKLVNLAA |
| sime | VEHFG..DQ | IRYFFLREVS | FGQ.DGSYSE | EGIATRINS | LANGIGNLAS |
| agtu | VAHFG..DP | VRYFFMREVS | FGQ.DGSYSE | EGIATRINAD | LANGIGNLAS |
| brsu | VERYGL..DQ | LRYFLMREVP | FGQ.DGSYSH | EAIVNRTNAD | LANDLGNLAQ |
| melo | IEHYGL..DQ | VRYFFLREVP | FGQ.DGSYSH | DAIVNRTNAD | LANGLGNLAQ |

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|-----------|-------------|------------|------------|-------------|------------|
| rhpa | ADQYGV..DQ | VRYFFLREVP | FGS.DGSYNH | EAIVNRINAD | LANDLGNLAQ |
| mytu | AEALGV..DQ | VRYFLLREVP | FGQ.DGSYSD | EAIVTRINTD | LANELGNLAQ |
| rhru | IETYGL..DP | VRYFLLREVP | FGN.DGDFSH | RAMINRMNGE | LANDLGNLAQ |
| noar | ADRFV..DP | LRYFLMREVA | FGQ.DGSYSA | EAIVTRCNAE | LANSYGNLVQ |
| rico | IDIEFGV..DQ | VRYFLMREVT | FGA.DGNFAR | SNLITRINSE | LSNKIGNLLQ |
| ripr | IDIEFGV..DQ | VRYFLMREVI | FGA.DANFAR | NNLITRINSE | LSNKIGNLLH |
| plyo | IESYGS..DA | FRFHVVKESK | RGY.DMRFDV | DNLVDMCNSD | LADTIGNLVQ |
| plfa | IDKYGA..DA | FRYHVIKETK | RGC.DTRFDV | DNLVDMCNSD | LADTIGNLVQ |
| clpel | VNMFGA..DA | VRYLLREIP | FGS.DGLFNN | EIIFIKKINTD | LANDLGNLLS |
| clac | INEFGT..DP | VRYLLHEIP | FGS.DGLFNN | EIIFIKKINS | LANDLGNLVS |
| liin | IDRYGL..DA | LRYLLREVP | FGS.DGLFTP | EDFVDRVNYD | LANDLGNLLN |
| limo | IDRYGL..DA | LRYLLREVP | FGS.DGLFTP | EDFVDRVNFD | LANDLGNLLN |
| baan1 | IDRYGL..DA | LRYLLREVP | FGS.DGVFTP | EGFVERINF | LANDLGNLLN |
| bacel | IDRYGL..DA | LRYLLREVP | FGS.DGVFTP | EGFVERINF | LANDLGNLLN |
| basu | IERYGL..DE | LRYLLREVP | FGS.DGVFTP | EGFVERINYD | LANDLGNLLN |
| bast | IDRYGL..DA | LRYLLREVP | FGS.DGVFTP | EGFIERINYD | LANDLGNLLH |
| baha | IDRYGL..DA | LRYLLREVP | FGS.DGVFTP | EAFVERVNYD | LANDLGNLLN |
| enfa | VERYGL..DA | LRYLLRAIP | FGS.DGVFTP | EDFVSRLNYD | LANDLGNLLN |
| ocih | VERYGL..DA | LRYLLMREVA | FGS.DGVFTP | EDFISRVNYD | LANDLGNLLN |
| stpy | VERFGL..DP | LRYLLMRSLP | VGS.DGTFTP | EDYVGRINYE | LANDLGNLLN |
| stpn | VERYGL..DP | LRYLLMRNLP | VGS.DGTFTP | EDYVGRINYE | LANDLGNLLN |
| stmu | VERYGL..DP | LRYLLMRSLP | VGS.DGTFTP | EDYVGRINYE | LANDLGNLLN |
| lala | IERYGL..DA | VRYLLMRAIS | FGQ.DGIFTP | EDFVGRINF | LANDLGNLLN |
| stau | IDRYGL..DA | TRYLLMRELP | FGS.DGVFTP | EAFVERTNFD | LANDLGNLVN |
| oeoe | ESRYGL..DA | VRYLLRSMP | FGN.DGVFSP | EDFVNRVNFD | LANDLGNLLN |
| thma | VKRYGN..DV | VRYLLIRDIM | FGK.DGDFSE | ERLVHRLNSD | LANDYGNLLH |
| thth | LEKYGR..DA | LRYLLREIP | YGQ.DTPVSE | EALRTRYEAD | LADDLGNLVQ |
| dera | VAAWPV..DA | IRYALLREAS | LGA.DSPFGE | GVLVSRLNSD | LANDLGNLLS |
| stco | TTHFGV..DA | YRWYFLRAIA | FGQ.DGSFSW | EDFSARYTSE | LANDYGNLAS |
| hepyj99 | AMEYGI..EE | LRYFLLREVP | FGQ.DGDFSK | KALVERINAN | LNNDLGNLLN |
| hepy26695 | AMEYGI..EE | LRYFLLREVP | FGQ.DGDFSK | KALIERINAN | LNNDLGNLLN |
| caje | VDAYGS..EA | FRYFLLREVP | FGN.DGDFSE | NMLINRINAE | LSNEFGNLLN |
| aqae | VQEYGL..DE | VRYFLLREVP | FGQ.DGDFSK | KAILNRINGE | LANEIGNLYS |
| funu | IKKYGV..DA | FRYLLREAN | FGT.DGDYST | KGIIGRLNSD | LANDLGNLLN |
| trer | IQKYGS..DA | VRYYFLKEIE | FGV.DGDFNE | NRFINVLNAD | LANDLGNLLN |
| sy6803 | INRYGE..DA | FRYFLKEIE | FGK.DGDFNE | QRFVNVLNAD | LANDLGNLLN |
| arth_1 | VQKFGP..DA | VRYFFLREVE | FGN.DGDYSE | DRFIKIVNAH | LANTIGNLLN |
| prma | LSKYGK..EA | VRWYLLKDIT | LGQ.DGDFQN | KRFVDIINND | LANTIGNLLN |
| caelmt | LDRYTV..DG | FRYFLLRQGV | PNW.DCDYYD | EKVVKLLDSE | LADALGGLLN |
| hosamt | LNRYTV..DG | FRYFLLRQGV | PNW.DCDYYD | EKVVKLLNSE | LADALGGLLN |
| tarumt | SQLFTT..DG | LRYFLLRQGV | PDT.DCDYRD | DKVVKLLNAE | LADALGGLLN |
| drmemt | AQQYTM..EG | LRYFLLREGV | AHS.DGNYSH | VKAQRILNSE | LADTLGNLLS |
| anga2 | AELYTY..EG | LRYFLLREGV | AHS.DGNYSD | TKVLRILNSE | LADTLGNLLS |
| didimt | IDNHGL..EL | IRYFLLKGGG | LEN.DGDWSE | HELAVRFKSD | LADTYGNLIS |
| caabmt | SEYYGV..DP | VRFFLVENS | IDD.DCKFSE | ELLQRSR.DA | VLGKYCNLIS |
| sacemt | ARYYGA..DI | VRWFLLENSK | LEE.DGDFQE | AKLYETR.EL | LVSKWGNLIN |
| scpomt | IEKYGV..DT | IRYLLKRGR | LTS.DSNFDI | EELEKDEEHD | LRRSLGVLLS |
| lema | AKEFGI..DA | LKYFLMRESN | FQD.DGDYSD | KNMVARLNGE | LADTLGNLVS |
| myge | IDQFGV..DG | TRYCLLKEMR | LDK.DNRCSV | SILKEIYNAD | LANSFGNHVS |
| mypn | LAQFGV..DG | TRYCLLKEMR | LDK.DNRCSM | AIFKDIYNAD | LANSFGNHAS |
| urur | IDTYGV..DA | LRYLLMADLS | LFR.DAIFSE | DNLIETYNTQ | LANSYGNMIS |
| mypu | IEKYGS..EV | LKYFLIAKLS | IKK.DGVFSE | ELLVSAYNND | LVNTFSNLIS |

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|-------|------------|------------|------------|--|------|------------|---------|
| mask | ***** | | | | | | |
| stpn2 | RTLKFIEK.. | ..YFESEIPT | KYLEG..... | | EILY | | |
| bace2 | RTLKFIEK.. | ..YYGGIVPK | GSIDV..... | | ELKD | | |
| baan2 | RTLKFIEK.. | ..YYGGIMPK | GSIDV..... | | ELKD | | |
| clpe2 | RVLTFIKK.. | ..NFSGEIKG | EELPL..... | | QWKN | | |
| deet | RVLTMVCR.. | ..NFDNKVPE | YG.EL..... | | DERS | L..... | NLI |
| codi | RTVSMAYK.. | ..NFG.EVPT | PG.EL..... | | TESD | K..... | KIL |
| thnw | RILSFMDR.. | ...YSINPDP | VD.VS..... | | GDEE | | F |
| thvo | RTLSFINK.. | ...YDLKITK | PN.SL..... | | NDEA | | F |
| pogi | RALVLTHK.. | ..YFDGAVPP | KG.EL..... | | TDCD | S..... | RTI |
| bafr | RAMVLTQK.. | ..YFEGKVPA | AG.EL..... | | TDYD | K..... | ETL |
| cyhu | RALVLTHK.. | ..YYDSVIPA | LG.KL..... | | EASD | E..... | GVI |
| chte | RSIDFTNS.. | ..RFGGQVPA | DI.DL..... | | EAWD | S..... | LGI |
| chmu | RVVAFAAK.. | ..NGCTELSH | P..QL..... | | EQOD | L..... | EFI |
| chtr | RVLAFAVK.. | ..NGCTELSS | P..QL..... | | EQKD | L..... | DFI |
| chpn | RVLAFAEK.. | ..NHYDKLSY | HSVVL..... | | EDSD | R..... | AFL |
| fugu | RAGMFVTK.. | ..FFEGCVPA | MVLQQ..... | | EDKK | | LL |
| hosa | RAGMFVSK.. | ..FFGGYVPE | MVLTP..... | | DDQR | | LL |
| anga | RALVFCEK.. | ..FFDSTIPP | MTLLE..... | | EDYT | | LL |
| drme | RALVFCEK.. | ..NFSSTVPG | VITTO..... | | DELV | | LL |
| sace | RLIKFVNA.. | ..KYNGVVPK | FDPK..... | | KVSN | | YDGLV |
| scpo | RTLKFTTA.. | ..KYNGLVPH | YLTDP..... | | SVGA | G.. | KLKADFV |
| didi | RVLKMLNT.. | NAAFNGVVPK | IGELN..... | | EVDK | | KLK |
| arth | RVLSFIAKPD | NAGYGSVIPD | AHDAE..... | | SHSL | | TKSLA |
| orsa | RVLSFVAKPA | GAGYDSIVPD | APNAE..... | | SHPL | | TKALA |
| cael | RALSFVAN.. | ..SFGGVVPE | MNLTN..... | | DD.. | | AEVL |
| encu | RVLKYIQS.. | ..KCNSRVSL | LELDS..... | | GDKK | | CI |
| trde | RTATFIHR.. | ..YYDGKIPQ | VDGAK..... | | SGRE | DIKSMVKSLR | |
| trpa | RTLTFVAR.. | ..TYGGVPPA | QDGAR..... | | STRA | QVMEETLALR | |
| bobu | RVLTFQRK.. | ..FFGDVIET | IE.IQ..... | | N... | | K.FW |
| cacr | RILKFNES.. | ..KFEGVPPA | GGEPP..... | | PLEE | K..... | LF |
| suto | RVLSMVRR.. | ..YFNGEVPQ | IKYEK..... | | LKDE | DTK..... | FI |
| suso | RVLSMVNR.. | ..YYSGIVPE | FKIDI..... | | LDDN | DRK..... | II |
| aepe | RVLSLVRS.. | ..RMSGVAPE | P..ED..... | | LGEH | QG..... | FV |
| pyba | RVLSFIKN.. | ..RMGGAVPP | R..GK..... | | PSRD | DEE..... | FI |
| pyho | RAMTFVNR.. | ..YFDGI.VP | ERGEL..... | | DELD | R..... | QAL |
| pyab | RALTFVNR.. | ..YFDGV.VP | ERGEL..... | | DELD | R..... | EAL |
| pyfu | RALTFVNR.. | ..YFDGI.VP | ERGEL..... | | DELD | R..... | QAL |
| meja | RVLTFTHR.. | ..KFKKVPIV | DEDRL..... | | KEED | K..... | ELL |
| meth | RTFSFTGR.. | ..FFDGR.VP | AAGEL..... | | TAED | L..... | EFL |
| arfu | RVLLFAWK.. | ..NFGEV... | .RMEG..... | | .VD | E..... | EVL |
| hanrc | RALLFANR.. | ..NFDGT... | .PQEV..... | | S.LT | D..... | DVE |
| psfl | RCAGFIQK.. | ..GNAGLLVD | TNAAP..... | | E... | | LT |
| psae | RCAGFIHK.. | ..GNAGVLVG | ADPAP..... | | E... | | LL |
| esco | RNAGFINK.. | ..RFDGVLAS | ELADP..... | | Q... | | LY |
| saty | RNAGFINK.. | ..RFDGVLAA | ELADP..... | | Q... | | LY |
| yepe | RNAGFINK.. | ..RFAGQLAD | QLADP..... | | V... | | LY |
| vich | RNAGFITK.. | ..RFDGKLSA | HFAEP..... | | E... | | LY |
| haein | RNAGFIAK.. | ..RFEGKLAD | KLEDK..... | | S... | | LF |
| acac | RNAGFIQK.. | ..RFDGKLAA | SLDDQ..... | | A... | | LF |

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|-----------|-------------|--------------|------------|------------|------------|
| pamu | RSAGFITK.. | ..RFDGKLSA | EIAEP..... |E... |LL |
| neme | RASGFIAK.. | ..RFEGRLKD | .VADS..... |E... |LL |
| nogo | RASGFIAK.. | ..RFEGRPKD | .VSGS..... |A... |LL |
| xyfa | RCASFIGT.. | ..RFNGQLAD | TLPDR..... |I... |QY |
| buAPS | RNASFINK.. | ..YFNGYLSLSD | KLSNI..... |K... |LY |
| sime | RSLSMIVK.. | ..NCDGQVPL | CGPLT..... |DE.. |DKAML |
| agtu | RSLSMIVK.. | ..NCDGQIPT | PGAFN..... |DD.. |DKAML |
| brsu | RSLSMIAK.. | ..NCEGKVPQ | PGAFS..... |EA.. |DKAIL |
| melo | RSLSMIAK.. | ..NCGGVVPK | RGEMT..... |DA.. |DSAIL |
| rhpa | RSLTMVAK.. | ..QCEGKVPE | HGAFS..... |ET.. |DSAIL |
| mytu | RSLSMVAK.. | ..NLDGRVPN | PGEFA..... |DA.. |DAALL |
| rhru | RVLSMIAK.. | ..NCAGAVPE | PGPFS..... |ED.. |DDALL |
| noar | RTLISMIFK.. | ..NMGGNLET | FHSNV..... |GD.. |DELLA |
| rico | RTTSFVYK.. | ..NNDAKVPL | LTQGV..... |IDKI | Y....ELPIL |
| ripr | RIVSFVYK.. | ..NNDAKVPL | IKSGV..... |IDKI | Y....ELPIL |
| plyo | RTLSLCIL.. | ..SNNAKIPP | LY..... |DD.. | I....DIDL |
| plfa | RTLSLCQL.. | ..CNEKIPA | FY..... |PE.. | Y....EIHLP |
| clpe1 | RTIAMVYK.. | ..YFGGVIQA | PTCK..... |EPI. |DDELI |
| clac | RTAAMIEK.. | ..YFDGSIQP | PVDK..... |EEI. |DNELI |
| liin | RTVAMINK.. | ..YFDGEIPA | YQGNV..... |TEF. |DQTLV |
| limo | RTVAMINK.. | ..YFDGEIPA | YQGNV..... |TEF. |DQILV |
| baan1 | RTVAMIDK.. | ..YFNGEIPA | FKANV..... |TEF. |DETLV |
| bacel | RTVAMIDK.. | ..YFNGEIPA | FKANV..... |TEF. |DGTLV |
| basu | RTVAMINK.. | ..YFDGQIGS | YKGAV..... |TEF. |DHTLT |
| bast | RTVAMIEK.. | ..YFGGAIIP | YRGPK..... |TPF. |DRDLS |
| baha | RTVAMIEK.. | ..YFDGKIPS | YVKDG..... |TPF. |DADLV |
| enfa | RTIAMINK.. | ..YCDGKVPA | YASKV..... |TPF. |DSELS |
| ocih | RTVAMINK.. | ..YFDGKVPE | FKGEV..... |TSF. |DGELQ |
| stpy | RTVAMINK.. | ..YFDGTVPA | YVDNG..... |TAF. |DADLS |
| stpn | RTVSMINK.. | ..YFDGQIPA | YVEGV..... |TEF. |DHVLA |
| stmu | RTVAMINK.. | ..YFGGEIPA | YVENV..... |TDF. |DADLA |
| lala | RTVSMINK.. | ..YNDGKIEA | TGVS..... |TEF. |DASLE |
| stau | RTISMINK.. | ..YFDGELPA | YQGPL..... |HEL. |DEEME |
| oeoe | RTISMINR.. | ..YENGQIPK | LDKLL..... |PE.. |DRELE |
| thma | RITAMIKK.. | ..YFNGLRPS | PSAQ..... |EGF. |DSWLK |
| thth | RTRAMLFR.. | ..FAEGRIP. | ..EP..... |VAG. |EELAE |
| dera | RTVSMIQK.. | ..YRGGVIPA | ATEP..... |TDR. |EREIE |
| stco | RVAAMVGK.. | ..YFGGELPA | ATADG..... |DAE. |QAIHD |
| hepyj99 | RLLGMAKK.. | ..YFNYSLSKS | TKIT..... |AYY. |PKEL. |
| hepy26695 | RLLGMAKK.. | ..YFNHSLKS | TKIT..... |AYY. |SKEL. |
| caje | RIIGMSTK.. | ..YSQGNISK | EGVL..... |KFY. |NAEL. |
| aqae | RVVNMAHK.. | ..FLGGEVSG | ARDE..... |EYA. | ..... |
| funu | RTLGMYYK.. | ..YFNGTIVS | SSTV..... |EPI. |DDEIK |
| trer | RTLKMAHK.. | ..YFNGQIPK | INVQE..... |VEV. |THPLK |
| sy6803 | RTLGMVKK.. | ..YCQGQGPQ | VMATD..... |LAP. |DNPLK |
| arth_1 | RTLGLLKK.. | ..NCEST.LV | VDSTV..... |AAE. |GVPLK |
| prma | RTSSMSRK.. | ..WFDNR..V | PSNEM..... |LSK. |DNSLE |
| caelmt | RCTAYRIN.. | ..PSGTYPSP | CAACFPSEPG | LTGPSVRVQA | E....DYALV |
| hosamt | RCTAKRIN.. | ..PSETYPAF | CTTCFPSEPG | LVGPSVRAQA | E....DYALV |
| tarumt | RCTATALN.. | ..PAQVYASF | CPDSFPRERG | .G....RADD | D....DYRML |
| drmemt | RASAKSLN.. | ..PGQIYPSP | SAEHLAD... |LLRSLD | V....AKRLQ |
| anga2 | RCCGKALN.. | ..AESIFPAV | DREALG.... |ALKEID | A....TKRML |

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|--------|------------|------------|------------|------------|------------|
| didimt | RCTGKALN.. | ..PSGEWPKS | VTDTS..... |LFTM | D....DQKLI |
| caabmt | RIGGKNFS.. | ..IEEAVKSF | ASGEFNN... | .IREIIETYT | I....NKDSV |
| sacemt | RCCGSKFN.. | ..IERAVMKF | SDKANFQ... | .FQEIFQNEP | I....VSERI |
| scpomt | RLQSKKLF.. | ..ISNEIQKQ | WHKK..... | ..DDFTEYED | I....VHELI |
| lema | RCVAPKIN.. | ..VNGMWPEP | AEYS..... |E | S....DKTLI |
| myge | RTFGMIKK.. | ..YLNKGL.E | YQII..... |TDN | A....LQKIM |
| mypn | RTFGMIKK.. | ..YLGQL.D | FIEV..... |QDP | Q....VKQLM |
| urur | RTLGMKK.. | ..YRNNIVPK | YVGC..... |VLK | N....DEKLE |
| mypu | RTVKMILN.. | ..NYDRPL.S | FILS..... |KDQ | E....DLEIE |

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|-------|-------------|-------|-------------|-------------|------------|
| mask | | |*** | ***** | ***** |
| stpn2 | .NLKELYTT. | | VGNLVESGHM | KQALEEIFEY | IRSANKFYDD |
| bace2 | .KIEGLYKH. | | VGEAIEQTKF | KVALEAIFDA | VRFANKYFDE |
| baan2 | .KIERLYKH. | ..... | VGEAIEQTKF | KVALESIFDA | VRFANKYFDE |
| clpe2 | .LIRRTYAS. | ..... | VGNKFENGEF | KSGVKEMFNL | IKQGNDFFDK |
| deet | EKTSAMLFE. | ..... | TDKALHGCNF | REAIKLAMSL | AQEANRYLDE |
| codi | AQAEAAFV. | ..... | VGEALAHSRF | KQGITHAMHI | VGEANAYIAE |
| thnw | KYAQRSFEL. | ..... | WSEDLSGVHV | KRGLLRWLDL | AIYANGFFNR |
| thvo | EYAQNAFKE. | ..... | YCDLSQVHI | KRSLAIWLNL | AIYANSYFNK |
| pogi | EEFAAVKQA. | ..... | LEHQLDTFHF | REALKEAMNL | ARIGNKYLAD |
| bafR | KEFSVDKAE. | ..... | VEKLLNVFKF | RDAQKEAMNL | ARIGNKYLAD |
| cyhu | MMLKEFPAK. | ..... | IAASIEQYRF | REALGFMMDL | ARLGNKYLAD |
| chte | DWLASFG.K. | ..... | LEAAYDGFHF | REATAQTMEI | ARFANRFLTE |
| chmu | AEAQKLAK. | ..... | AADHYQQYSL | RKACSTIMEL | AALGNGYFND |
| chtr | SKSQKLAKD. | ..... | AAEHYAQYSL | RKACSTIMEL | AALGNGYFND |
| chpn | EEVRQLVRD. | ..... | AEKCYREYSL | RKATSVIMSL | AALGNVYFNQ |
| fugu | ALVAWELQQ. | ..... | YIQLMDKVKI | RDSLKHILNI | SRHGNQYIQV |
| hosa | GHVTLELQH. | ..... | YHQLEKVRTI | RDALRSILTI | SRHGNQYIQV |
| anga | ALINRELKG. | ..... | YVNQMEKARM | RDGIRHLLQI | SRYGNQLMQS |
| drme | ALINRELRG. | ..... | YINSMEKAKL | RDGVRHLLAI | SRHNGYMQS |
| sace | KDINEILSN. | ..... | YVKEMELGHE | RRGLEIAMSL | SARGNQFLQE |
| scpo | KDVNALLAK. | ..... | YNAALEASKL | REGLRLAMEI | SARGNQYLQD |
| didi | QEVDEHLVQ. | ..... | YFQKLEEISL | KEGLKIAMS | SKLGNTYMQD |
| arth | EKVEKFVAE. | ..... | YVEAMEKVKL | KQGLKTAMLI | SSEGNYLQA |
| orsa | EKTNKWVEQ. | ..... | YLEAMEKVKL | KQGLKSAMGI | SSDGNAYLQE |
| cael | SEIHNECMQ. | ..... | WDKQFDGVHL | KDAVKTILNV | SRLGNQYMQA |
| encu | EDVNELYCK. | ..... | YKAKMEEIKL | REALQVMEI | CRRGNEYIQE |
| trde | EAASASFKK. | ..... | ITELSDWAE | RDSFHEAFAL | SSVANKAFQD |
| trpa | EAVRNTAKR. | ..... | MTDLMEQVQL | REAFREVFAL | SARANKALQD |
| bobu | KQITPKYNK. | ..... | ILNLFKKTEL | KSALKEILKI | SSLGNKIFQD |
| cacr | ADVSARLAD. | ..... | LAEQMDAIEI | RKSAQALRAL | WVVGNEYLQE |
| suto | SEIKEAPKK. | ..... | MSELFELGKL | KAGSEEILKL | ARNGNSYLN |
| suso | SLINETPKV. | ..... | VGDLFEKGKL | KAGTEEMLKF | VRECNAYLNM |
| aepe | ERVRAAWA. | ..... | VAEDLEAIRI | KRATEGILEI | AREGNAYLNR |
| pyba | EKVKRLF EK. | ..... | AEAHYEAIEL | KDAVHTVVEI | AREGNKYLNA |
| pyho | EEIEKAFEE. | ..... | VGELIMNYRF | KDALKRVMEL | ASFGNKYFDH |
| pyab | EEIEKAFKE. | ..... | VGELIMNYRF | KDALKRVMSL | ASFGNRYFDH |
| pyfu | EEIEKTFEE. | ..... | VGKLIREYRF | KDALKKVMNL | AGFGNRYFDY |
| meja | KKCEETLEA. | ..... | VDKNIRSFKF | RDALVNILHL | AIEGNSYFQK |
| meth | ESIRAAHDT. | | VAELLDKFFQF | RDALMHI IKL | AKRGNKYFND |
| arfu | EKIRETEQK. | | ILSALEEWEF | KAASDAFMEL | ATYGNVYFQN |

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|-----------|------------|-------|-------------|-------------|------------|
| hanrc | TEIAQAMDD. | | YEDALNEYDL | RTAGERAVAL | ARFGNEYIQH |
| psfl | EAFLLAAPS. | | IADAYEARDF | ARAMRETMAL | ADRANAWIAD |
| psae | AAFREAAPG. | ..... | IAEAYEARDF | NRAMREIMAL | ADRANAWIAE |
| esco | KTFTDAAEV. | ..... | IGEAWESREF | GKAVREIMAL | ADLANRYVDE |
| saty | KTFTDAAAV. | ..... | IGEAWESREF | GKAIREIMAL | ADVANRYVDE |
| yepe | KTFTDAATS. | ..... | IADAYNNREX | GKAIREIMAL | ADVANRYVDE |
| vich | AEFAGAADR. | ..... | IAELFEAREF | GRAIREITAL | ADKANQYVDE |
| haein | AEFTAQAEQ. | ..... | IAAYYESREY | NKTIREIMAL | TDKANKYIDE |
| acac | DEFIAQSEQ. | ..... | IAAYYENREF | GKAIREIMAL | TDKANKYIDD |
| pamu | AEFVEKAAQ. | ..... | IATYYEEREF | GKVVREVMQL | ADKANKYIDD |
| neme | AKLTAQSEA. | ..... | IAECYESREY | ARALRDIMAL | ADIVNEYVDA |
| nogo | AKLAAESDT. | ..... | IAEQYENREY | ARALRDIMAL | ADIVNEYVDA |
| xyfa | DQFVAALTP. | ..... | IRDAYERNDT | ASAIRQTMQL | ADEANKYIDE |
| buAPS | KYFVNTSSS. | ..... | IEDFFENREF | SFIVKESMRL | LDVANQYINE |
| sime | AAADSLIGT. | ..... | AREEMGKQLI | HRALAAIIAV | VSETDRYFAG |
| agtu | ASADGLLAV. | ..... | CREEMGKQLI | HRALAAIIAV | VSETDRYFAS |
| brsu | DQADAALET. | ..... | ARKAMDDQAL | HLALGAIFAV | VAEANRYFAG |
| melo | DQAVAALTT. | ..... | ARKAMAGQGI | HLALAAIFDV | VAEADRYFAG |
| rhpa | AMADAMITQ. | ..... | ARTAMATQQI | HQALNAVWAV | VAEANRYFAG |
| mytu | ATADGLLER. | ..... | VRGHFDAQAM | HLALEAIWLM | LGDANKYFSV |
| rhru | AAVALLDK. | ..... | VRQAMDRQAF | HEALEAIWVW | IRAANGYVDR |
| noar | TVFNACREE. | ..... | LPREFSALNF | SAGIEAWMRA | VFACNAYVDE |
| rico | KTASKFVEQ. | ..... | NILLMDKTEI | NKILENI INL | AEEANIYIDS |
| ripr | KTAIKFAQE. | ..... | NILLMDKTEI | NKILENI INL | AEDANIYITN |
| plyo | FCMLHFINR. | ..... | IEYYMKNFHI | HKFCEKTVNV | CKDLNKFLTD |
| plfa | IDILHFINR. | ..... | VEYHMKTFCV | QKCCEKSVQV | CKDLNKFLTD |
| clpel | NLALSTPGK. | ..... | VEASIDALKI | PEALESIWTL | ISRANKYIDE |
| clac | DMAISLPEK. | ..... | LDEDIKKLLKI | PEALDHIWDL | IKRANKYIDE |
| liin | DFKNNVVKE. | ..... | YEGSMDHMQF | SVALNQLWSL | ISRTNKYIDE |
| limo | DFKNNVVKE. | ..... | YEGSMDHMQF | SVALNQLWSL | ISRTNKYIDE |
| baan1 | TFAKDTLKK. | ..... | VEEAMENMEF | SVALSSIWQL | VSRTNKYIDE |
| bacel | TFAQDTLKK. | ..... | VEEAMENMEF | SVALSSIWQL | ISRTNKYIDE |
| basu | SVAEETVKA. | ..... | YEKAMENMEF | SVALSTLWQL | ISRTNKYIDE |
| bast | ETAREVVRQ. | ..... | YEEAMERMEF | SVALSAVWQL | IGRTNKYIDE |
| baha | ELVYSTVKK. | ..... | VEDAMEEMEF | SIALTAIGQL | ISRTNKYIDE |
| enfa | TTAANVIGK. | ..... | YHEAMEKMEF | NTAIAEIWTL | VSRANKYIDE |
| ocih | TTANNAVKE. | ..... | YEKHMEGMQF | SDALKQVWIL | ISRANKYIDE |
| stpy | QLIDAQLAD. | ..... | YHKHMEAVDY | PRALEAVWTI | IARTNKYIDE |
| stpn | EVAEQSIAD. | ..... | FHTHMEAVDY | PRALEAVWTL | ISRTNKYIDE |
| stmu | AVVADNLAQ. | ..... | YHKQMNAVDY | PRALETVWNI | ISRTNKYIDE |
| lala | EVVEETISH. | ..... | FHKAMDKFEF | NVALADVWTL | ISRTNKYIDE |
| stau | AMALETVKS. | ..... | YTESMESLQF | SVALSTIWKF | ISRTNKYIDE |
| oeoe | ETASQAVEN. | ..... | FKDEMEKVHT | ADALEAVWTL | IRRTNKYIDE |
| thma | ERFFETKDA. | ..... | YHELMDSYRL | TEALDKIWEF | IADVKNYFND |
| thth | GTG..LAGR. | ..... | LRPLVRELKF | HVALEEAMAY | VKALNRYINE |
| dera | AAARALPDE. | ..... | VLRLVDELKI | NMAIDAAMSF | VRDLNRYIAE |
| stco | GLTKAVAEA. | ..... | DRKIGEELDF | QGGILAVFDF | VKQVNGYITE |
| hepyj99 | EKAHQILDN. | ..... | ANSFVPMQL | HKALEELFNI | YDFLNKLIK |
| hepy26695 | EKVHQILDN. | ..... | ANSFVPMQL | HKALEELFNV | YDFLNKLIK |
| caje | NQAKEHLNL. | ..... | AVEFLENLQC | NRYLEELFKA | LSVANLAISK |
| aqae | KIAQESIKN. | | YENYMEKVN | YKAIEEILKF | TSYLNKYVDE |
| funu | SMFNDVVKD. | | VEKYMYLFEF | SRALETIWKF | ISRLNKYIDE |

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|--------|-------------|------------|------------|------------|------------|
| trer | KIGMGLGEK. | | VTQAYTSLDF | SQVCEAVLIL | VRTGNKYIDE |
| sy6803 | ALGSHLSEE. | | VSSAYERLSF | TDACEAIFTL | VRAGNKYIDD |
| arth_1 | DTVEKLVEK. | ..... | ARTNYENLSL | SSACEAVLEI | GNAGNTYMDQ |
| prma | LYAKKTVEN. | ..... | YFRHFNSYEL | DLAANVILSL | AINTNLYLNE |
| caelmt | TAVATLPKL. | ..... | VAGYYNDFQI | YKALEAVSSC | VRQTNGFVQR |
| hosamt | SAVATLPKQ. | ..... | VADHYDNFRI | YKALEAVSSC | VRQTNGFVQR |
| tarumt | ESVRHLPVAV. | ..... | VEQHFEDMHV | YKALEAVSTC | VRQTNGFVQR |
| drmemt | DSLLQLSER. | ..... | CESHYECNHF | HLVADTTMAA | LHAANNFFES |
| anga2 | EALEEMPDK. | ..... | ASSHYKNYNF | YLVVDTIVHL | LHTANNFFET |
| didimt | ENSSILVKS. | ..... | VSTHYDRGDF | KSGIFEIMTF | LYECNLYVQN |
| caabmt | EGLLSSLNKL | TTDLNDLYNQ | MDHYFTNFDY | IRAIQCWWSV | INQANQIFQS |
| sacemt | ENLAKLLNK. | .SQ.....EV | FDEKIAIFQY | PQLLRHVWSI | INDANTLVQN |
| scpomt | ELPVVCAQS. | ..... | ....IDGCV | YEVINLVQSV | LRRVTKLFLQ |
| lema | ASLNNLAGT. | ..... | VDHYYCLPDI | QHALIAIFDV | LRSLNAYVTE |
| myge | ILIDESIVQ. | ..... | FDHYFNSEYF | YRAINLLKI | VFELSKLIDD |
| mypn | DQANQAMVQ. | ..... | FDTAWNRFQF | YKGINLLQL | VFQASKLIDQ |
| urur | NLINKNIEL. | | VQENINKYSI | DKALNCIQEI | LVEANKYIED |
| mypu | KDIKNSFET. | | FCSFAEYEF | DKAFESTINL | GKKLNLYIDK |

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|-------|------------|-------|------------|------------|-------------|
| mask | ***** | | | |*** |
| stpn2 | MKPWALRES. | | DIE...KCK | EVLATCVIII | LNLGQMLNPF |
| bace2 | RQPWKERED. | | DPV...SCE | ETIYNCVYLI | ANFVNLLLEPF |
| baan2 | RQPWKERED. | ..... | DPV...SCE | ETIYNCVYLI | ANFANLLEPF |
| clpe2 | NKPWILINN. | ..... | NKK...KCE | EVLYICSQIL | VALTDLMNPI |
| deet | KAPWKEIK.. | ..... | .VD..KAAA | RSLYVAMAAL | SGLRVAFYFP |
| codi | QEPWKLAKD. | ..... | ESQ..RERLA | TVLWTALQVV | SDCNVLLTPY |
| thnw | SEPWKTIK.. | ..... | .ND..RQKLN | HDLYLSLKIT | EVLTVMVYPY |
| thvo | SEPWNLIK.. | ..... | .TD..RDQCN | YKLYVSLKLA | QYLTAMIYFP |
| pogi | TEPWKLAK.. | ..... | TD...MNRVA | TILNLSLQIT | ANLAIAFEPF |
| bافر | TEPWKLAK.. | ..... | TD...MERVG | TILNLSLQLV | ANLAIAFEPF |
| cyhu | TEPWKIYK.. | ..... | EN...PERVK | TILHIGLQIA | ANLAIVSEPF |
| chte | SEPWKVIK.. | ..... | VD...PEAAG | RTMAVSLNLC | HTLALLFWPI |
| chmu | QAPWKLAK.. | ..... | EDL..WNRVR | SILFCACYCQ | KLLALISYPI |
| chtr | EAPWKLAK.. | ..... | EGN..WNRVR | AILFCACYCQ | KLLALISYPI |
| chpn | QAPWKLAK.. | ..... | EGT..RERVE | AILFCACYCQ | KLLALISYPI |
| fugu | NEPWKNIKA. | ..... | GDA.ERQAG | TVTGVSVNIA | CLLSVMLYPY |
| hosa | NEPWKRIKG. | ..... | SEA.DRQAG | TVTGLAVNIA | ALLSVMLQPY |
| anga | EPPWKVKG. | ..... | TDD.QKARAG | TVIGLCCNFA | CLLATLIFPF |
| drme | QQPWVLLKG. | ..... | TDD.QKTRAS | TIIGLCVNIA | CLLANLLFPY |
| sace | NKLDNTLFS. | ..... | QSP.EK..SD | AVVAVGLNII | YAVSSIITPY |
| scpo | NRIDNKCYL. | ..... | YER.QK..CA | DAIGYALNLI | YLLAAIFYPY |
| didi | NKPWDLG.. | ..... | KDN.ER..CG | QVLAILINLI | KLLSTLLEPY |
| arth | SQFWKLYKE. | ..... | D...KPLCA | VVIRTAAGLV | HLLAQLLEPF |
| orsa | SQFWKLYKE. | ..... | D...PAACA | VVMKTSVGVV | YLLACLLEPF |
| cael | QTPWVLMKK. | ..... | DEE.GKKRAG | TIIGVAANIA | YHVSVLLYPI |
| encu | G....VRS. | ..... | RDR..K..G | HFFCLGFSII | GLVGTLLHPF |
| trde | GEPWK.RRE. | ..... | TDP.EY..AE | ALMSELCYLI | KDILILIHYPY |
| trpa | GAPWK.TRA. | ..... | QDR.ER..AD | ALMRELCYVI | RDVLLLAHPF |
| bobu | NEPWK.RKN. | ..... | NSP.QE..TK | ELISNLIYLI | RDLISILMMPF |
| cacr | AAPWTAIKT. | | D.R.DR..AA | VIVRTALNLA | ALYAKISAPF |
| suto | RAPWNLIK.. | | DKE....EAG | NVLNIAVNSL | RTLSIMLYPL |

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|-------|------------|-------|------------|------------|------------|
| suso | KAPWDLYKS. | | GKEI...ELK | NTLYIGTNSV | KTIAILLYPL |
| aepe | TQPWKLLSQ. | | DRE....EGV | RALSAALYAV | KTLAHLAPF |
| pyba | RAPWDLVKK. | ..... | DVD....AAN | AVMYHAYWSL | KFLAVGLAPA |
| pyho | KQPWKTAKE. | ..... | DRA....RTG | TTVNISLQIV | KALGILLEPF |
| pyab | KQPWKTAKE. | ..... | DKV....RTG | TTVNISLQIV | KALGILLEPF |
| pyfu | KEPWKTIKE. | ..... | DKT....RTG | TTINISLQIV | KALGILLEPF |
| meja | MEPWAVDDE. | ..... | E.....RLK | EILYTCKTV | KTLVYLLYPY |
| meth | QEPWKAVKE. | ..... | SPA....RAS | TCLHLCNLLA | ANLGKLLRPF |
| arfu | AKPWELIKT. | ..... | DKE....AAR | RAVASCLQLA | KALIFAYPV |
| hanrc | NEPWNL.... | ..... | DSE....AAA | PVMRDCVQLV | KAVAVLLQPF |
| psfl | KAPWSLNKQ. | ..... | EGK..QDEVQ | AVCATAINLF | RQLVIFLKPV |
| psae | QAPWALAKQ. | ..... | EGQ..QDKVQ | AVCGLGINLF | RQLVIFLKPV |
| esco | QAPWVAKQ. | ..... | EGR..DADLQ | AICSMGINLF | RVLMTYLKPV |
| saty | QAPWVAKQ. | ..... | EGR..DADLQ | AICSMGINLF | RVLMTYLKPV |
| yepe | QAPWVAKQ. | ..... | EGR..DADLH | AICSMGINLF | RVLMTYLKPV |
| vich | KAPWVAKQ. | ..... | EGQ..DQALQ | DICTVGINLF | RVLMTYLKPV |
| haein | KAPWVIAKE. | ..... | EGK..EAELQ | AVCSMGIELF | RVLMSYLKPV |
| acac | KVPWVIAKE. | ..... | AGK..DAELQ | AVCSMGIQLF | RVLMGYLKPV |
| pamu | KAPWVMAKE. | ..... | EGR..EAELQ | AVCSMALQLF | RVLAIYLKPV |
| neme | NKPWELAKQ. | ..... | EGQ..DARLH | EVCSELINAF | TMLTAYLAPV |
| nogo | NKPWELAKQ. | ..... | EGQ..DERLH | EVCSELINAF | TMLTAYLAPV |
| xyfa | TKPWIIAKQ. | ..... | HNA..DAQLH | AVCTQGLNLF | RVLITALKPI |
| buAPS | KKPWKIKRT. | ..... | EEN..IRELQ | NICTMGINLF | RIIMIFLKPI |
| sime | QEPWALKKT. | ..... | ...DPSRMA | TVLYVTAEVV | RQVAILLQPF |
| agtu | QEPWALKKT. | ..... | ...DPERMG | TVLYVTAEVV | RQIGILLQPF |
| brsu | QEPWALRKT. | ..... | ...DPARMG | TVLYVTAEVL | RRVGIMVQPF |
| melo | QAPWALKKT. | ..... | ...DPERME | TVLWTTAELV | RRVAVLCQPF |
| rhpa | EAPWALAKT. | ..... | ...DPARQK | TVLYVTAEVL | RQIAILAQPA |
| mytu | QQPWVLRKS. | ..... | ESEADQARFR | TTLYVTCEVV | RIAALLIQPV |
| rhru | QAPWALRKN. | ..... | ...DPPRMA | TVLYVLAEVI | RRVALLMQPF |
| noar | QAPWALRKT. | ..... | ...DPERMK | AVLLTLFIAI | RDLTVAISPV |
| rico | EAPWNLKKT. | ..... | ...DPDKML | EVLYALLEVL | RYIAIMLLPF |
| ripr | EAPWNLKTT. | ..... | ...DPDKML | EVLYSLLEVL | RYIAIMLQPF |
| plyo | LAPWKYKEE. | ..... | S...EKNKKL | HIIRLMLESI | YFIAHYIDIV |
| plfa | MAPWKYKDD. | ..... | ...LKNKKL | HIIRIMLEAI | YFIAHYLDIF |
| clpel | TTPWILAKD. | ..... | EE..KKERLG | TVLYNLETL | RFVSVMISPF |
| clac | TTPWVLAKD. | ..... | EN..KKARLG | TVLYNLVESL | RFVATTLTPF |
| liin | TAPWALAKE. | ..... | ED..KRTELA | SVMTHLAENL | RIIAVLLQPF |
| limo | TAPWALAKD. | ..... | ED..KRTELA | SVMTHLAENL | RIIAVLLQPF |
| baan1 | TQPWVLAKD. | ..... | ED..DREKLA | SVMAHLAEVL | RQTGIMLMPF |
| bacel | TQPWVLAKD. | ..... | EN..DREKLA | SVMAHLAEVL | RQTGIMLMPF |
| basu | TAPWVLAKD. | ..... | PA..KEEELR | SVMYHLAESL | RISAVLLQPF |
| bast | TQPWVLAKE. | ..... | ES..KREELA | SVMAHLAESL | RYTAVLLQPF |
| baha | TQPWVLAKD. | ..... | ES..KREQLG | AAMYHLAESI | RYVSVLLQPF |
| enfa | TAPWVLAKE. | ..... | EE..KRNELE | SVMIHLESL | RIVAILLQPV |
| ocih | TEPWIVAKD. | ..... | EG..RRNELA | SVMVHLAESL | HAAALMLQPF |
| stpy | TAPWVLAKE. | ..... | DG..DKAQLA | SVMAHLAASL | RLVAHVIQPF |
| stpn | TAPWVLAKD. | ..... | EA..LRDQLA | SVMSHLAASI | RVVAHLIEPF |
| stmu | TTPWVLAKD. | ..... | KA..KRDDLA | AVMAHLAASL | RVVAHLIQPF |
| lala | TAPWVLAKS. | ..... | ED..DKAKLN | NVLYHLAENL | RIAGALLQPF |
| stau | TTPWVLAKD. | | DS..QKDMLG | NVMAHLVENI | RYAAVLLRPF |
| oeoe | TEPWVLDKN. | | K...QRAELD | DAMAHLAASL | RVVGSLLQPV |

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|-----------|------------|------------|----------------|--------|------------|------------|
| thma | TKPWILGKE. | | G... | NMERLG | TVLYNSLEAV | FKVALMTLPV |
| thth | KKPWELFKK. | | EP.. | EEAR.. | AVLYRVVEGL | RIASILLTPA |
| dera | STPWTLAKS. | ..... | PE.. | TQGRLD | TVLYTAAEGL | RVASVALEAV |
| stco | QEPWKVAKD. | ..... | DSPEGKARLA | | TILYTAEEAL | RAVAVLLNPI |
| hepyj99 | EEPWVLHK.. | ..... | NN.. | ESEKLE | ALLSLIANTL | LQSSFLLYAF |
| hepy26695 | EEPWVLHK.. | ..... | NN.. | ESEKLE | ALLSLIANAL | LQSSFLLYAF |
| caje | YEPWSLIK.. | ..... | EN.. | KHEQAN | ALVALCANIL | AKTSLLLSPT |
| aqae | KQPWALNK.. | ..... | ER.. | KKEELQ | KVLYALVDGL | FVLTHLLYPI |
| funu | TMPWTLAKN. | ..... | EA.. | KKARLA | AVMNILCEGL | YKIAFLIAPY |
| trer | TAPWSLYKQ. | ..... | G... | QLEALT | EVLYSVLESV | RLVAYLLSPI |
| sy6803 | MAPWKLFKQ. | ..... | G... | SQKEVE | DVLYSVLESI | RLSAYLLSPI |
| arth_1 | RAPWFLFKQ. | ..... | GGV. | SAEEAA | KDLVIILEVM | RVIAVALSPV |
| prma | KQPWTLIKD. | ..... | EK.. | NIPLVS | NIIYNVLEST | RIVGLLLLPI |
| caelmt | HAPWKLNW.. | ..... | ESP .E.. | DAPWLG | TVLHVALECL | RVFGTLLQPV |
| hosamt | HAPWKLNW.. | ..... | ESP .V.. | DAPWLG | TVLHVALECL | RVFGTLLQPV |
| tarumt | HAPWKLDR.. | ..... | KDS .A.. | DQRWLG | TIIHVSLECL | RIYGTLLQPV |
| drmemt | SKPWTLKA.. | ..... | GAP DG.. | NQARLE | TIIAMTMDAL | RLSGIVLQPI |
| anga2 | TAPWKLKK.. | ..... | SDN PA.. | DRAKLN | TILSVTMEVL | RQAGIAAQPI |
| didimt | QAPWKLVP.. | ..... | KPN RVGSDLIRLN | | TIIYIAIEMI | ..... |
| caabmt | AEPWTYVKLI | NSPETPAELK | EKY.. | RILNN | YFVYLCAETT | RISSILIQPV |
| sacemt | SKPWER.... | ..... | ELD QQ..... | D | NIIFLAMETS | RILSILCQSI |
| scpomt | KEPWKLSD.. | ..... | DSQ EK..... | I | DTLMLVAHSL | RISGILLQPI |
| lema | NAPWKLVK.. | ..... | MDT AR..... | LG | TVLYVTMEGL | RICTMFLQPV |
| myge | FKPWELFKN. | ..... | QEF SL..... | LK | QLLFTCVRCV | QVCYVLLTPI |
| mypn | LKPWELVKQ. | ..... | TDY TL..... | LK | QLLFACVRCT | QVCFVLLAPI |
| urur | NKPWELAKN. | | QQE QE..... | LD | SLLVHLVKVI | QVTTTLLSPI |
| mypu | TRPWLLTK.. | | ED QK..... | LE | IVLNRLNNGI | YAMAFELSIV |

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|-------|------------------|-------------|----------|-------|-------|------------|
| mask | **..... | | ~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | IPFSGKKIED | MFKTKLNTWN | | | | |
| bace2 | LPFSSSERVRN | TL SIVKRNWE | | | | |
| baan2 | LPFSSSERIRN | TL SIVNRNWE | | | | |
| clpe2 | IPFTCEKIKM | FLGIKDTKWS | ..... | ..... | ..... | ..... |
| deet | LP E S S R L S T | Y L G..... | ..... | ..... | ..... | ..... |
| codi | LPHIAQQVHE | TLGRDGV.. | ..... | ..... | ..... | WA..... |
| thnw | IPSSAEKIWN | MLG..... | ..... | ..... | ..... | ..... |
| thvo | TPTS AKAIWE | QLG..... | ..... | ..... | ..... | ..... |
| pogi | LPFSSAKLMS | MLSTDCPFG. | ..... | ..... | ..... | WDR LGST |
| bafr | LPFSSERLRQ | MLNMDS.FD. | ..... | ..... | ..... | WAE LGRN |
| cyhu | IPFTSAKLFT | MLNLKA.NT. | ..... | ..... | ..... | WNNAGTI |
| chte | VPETANRIWK | MLGFEGTIDE | LVE..... | ..... | PG | NPVWRQALEP |
| chmu | MPETAWTIWG | MIAPGS.... | ..... | ..... | ..... | ..... |
| chtr | MPETALKILE | MIAPHS.... | ..... | ..... | ..... | ..... |
| chpn | IPESAVAIWE | MISPKS.... | ..... | ..... | ..... | ..... |
| fugu | MPTTTSQTIRD | QLNCPQSVIG | T..... | ..... | ..... | MLRGNGNFV |
| hosa | MPTVSATIQA | QLQLPPPACS | I..... | ..... | ..... | LLT...NFL |
| anga | MPTTARNMYS | QLNVRGGFIN | S..... | ..... | ..... | DKP...LIR |
| drme | MPTTARTLFG | QLNAKQTPLN | ..... | ..... | ..... | AEP...LVT |
| sace | MPEIGE KINK | MLNAPALKID | D..... | | | RFHL..... |
| scpo | MPSTSTSIYK | QLNAPAAAIP | D..... | | | TWEL..... |
| didi | IPSLTDKVHQ | QLNVEPTKYS | T..... | | | HFDIN..... |

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|-------|-------------|------------|------------|------------|------------|------------|
| arth | MPSFSCEVFK | QLNLPPQFSL | S..... | | DER | GEVLLASRPW |
| orsa | MPSFSNEVLL | QLNMTPEESL | SFC..... | | DDK | GEIAKAKRPW |
| cael | MPTISATIRE | QCGLP...AL | P..... | ..... | ... | LFTPFPI |
| encu | IPVTSLEILR | MCNLEETMFP | ES..... | ..... | ..... | ..... |
| trde | MP..... | ..... | ..... | ..... | ..... | ..... |
| trpa | LPWYTQQAAR | FLGVQLSSCA | PEGGGAVCAA | KKDADTAQPD | TVQPTLRWSD | |
| bobu | IPETSKKIQQ | FFGN..... | ..... | ..... | .. | SYQFSTKI |
| cacr | IPFAAEKIGD | AFGLDFPASW | P..... | ..... | .SND. | AKAEL |
| suto | MPKSAEKLYN | MLGFK.DIE. | ..... | ..... | .REK | WDLAGE |
| suso | MPSHAQKIYE | MLNMG.NIE. | ..... | ..... | .NEK | WDVAST |
| aepe | TPDAADRLWS | MLGLAGSVH. | ..... | ..... | .EAV | WDEWLD |
| pyba | IPESAEQLWK | MMGLD..A.. | ..... | ..... | .PLT | WEEAKR |
| pyho | LPDASEKIWH | LLNLD..... | ..... | ..... | ...EV | KKWKWF |
| pyab | LPDASEKIWH | LLNLD..... | ..... | ..... | ...EV | KRWEF |
| pyfu | LPDASEKIWH | FLNLE..... | ..... | ..... | ...EV | KTWRF |
| meja | MPKKSALLE | LMNEE..... | ..... | ..... | ...LDL. | EL |
| meth | MPSAAGRILS | IMNLE..... | ..... | ..... | ...DEA. | WGF |
| arfu | MPESMERMAK | AIGLD..LE. | ..... | ..... | ...NV | RLSDA |
| hanrc | LPEKTETLWA | QLGEDGRVS. | ..... | ..... | ...DATI | ADC |
| psfl | LPVLAADAEA | FLNV..... | ..... | ..... | ..A | PLTWNDH |
| psae | LPKLAATAEA | FLNV..... | ..... | ..... | ..A | PLTWADH |
| esco | LPKLTERAEA | FLN..... | ..... | ..... | ..TEL | TWDGI |
| saty | LPTLERVEA | FLN..... | ..... | ..... | ..SEL | NWDAI |
| yepe | XPSLTERTEA | FLN..... | ..... | ..... | ..TEL | TWDSI |
| vich | MPALAEERTEA | FLN..... | ..... | ..... | ..QEL | TWEGV |
| haein | LPKLAERAET | FLQ..... | ..... | ..... | ..AEL | RWDNI |
| acac | LPKLAERAEA | FLQ..... | ..... | ..... | ..SKL | TWANL |
| pamu | IPQIIARAEA | FLQ..... | ..... | ..... | ..DEL | TWESL |
| neme | LPQTAANAAR | FLNL..... | ..... | ..... | ..EAI | TWANT |
| nogo | LPQTAANAAR | FLNL..... | ..... | ..... | ..DAI | TWKNT |
| xyfa | LPHTSIQAET | FLAA..... | ..... | ..... | ..PVT | AWQDV |
| buAPS | VPDLAIKTES | FLI..... | ..... | ..... | ..SKL | TWDGI |
| sime | MPESAGKLLD | LVAVPTD... | ..... | ..... | RRDF | AHLGEAGR.. |
| agtu | MPQSCEKLLD | LVAAPAD... | ..... | ..... | GRDF | TALGEAGR.. |
| brsu | IPQSAEKLLD | ILAVPAD... | ..... | ..... | KRQF | ADVLAS.P.. |
| melo | IPGSAEKLLD | LLAVPAD... | ..... | ..... | KRDF | VHVHADYA.. |
| rhpa | IPTAAKLLD | ILGIAEG... | ..... | ..... | QRDF | AALATR.... |
| mytu | MPESAGKILD | LLGQAPN... | ..... | ..... | QRSF | AAVGVR.... |
| rhru | VPASAARMLD | QLGQGPE... | ..... | ..... | ARDT | TALGDRPL.. |
| noar | VPAAAAKVLD | QLGIPRE... | ..... | ..... | ARGF | DALTDADWYM |
| rico | IPSSANKMLD | QLGVNKE... | ..... | ..... | ERLF | KHLIRDYT.. |
| ripr | VPNSANKMLD | QLGVSKE... | ..... | ..... | ERLF | KHLVRDHA.. |
| plyo | VPMIASNIFS | QLNTPKKK.. | ..... | ..... | IVDL | NPWLNN.... |
| plfa | IPSLSHKIFE | KLNTPKKV.. | ..... | ..... | IADL | SPWLNN.... |
| clpel | LTETSVKINA | QLNTKVTT.. | ..... | ..... | WESL | K.....EF |
| clac | LPETGEKIKT | QLNIELDT.. | ..... | ..... | WESL | S.....AF |
| liin | LTRTPGEIFL | QLGLQEEN.. | ..... | ..... | LKKW | DS....IYGY |
| limo | LTRTPGEIFL | QLGLQEEN.. | ..... | ..... | LKKW | DS....IYGY |
| baan1 | LTVAPSKMFA | QLGLTDEA.. | ..... | ..... | HTSW | GS....LSTI |
| bacel | LTVAPSKMFA | QLGLTEEA.. | ..... | ..... | HTSW | ES....LSTI |
| basu | LTKTPEKMFE | QLGITDES.. | | | LKAW | DS....ITAF |
| bast | LTRTPERIFT | QLGISDRS.. | | | LKEW | DS....LYDF |

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|----------|------------|------------|--------|-------|--------|------------|-------|
| baha | MTKAPQKIWE | QLGIDS.S.. | | | LTTW | ES.... | LETF |
| enfa | MTETPGKIFE | QLGLDPET.. | | | MNME | N..... | IHF |
| ocih | LTHAPKKIAE | QLGLGEEY.. | ..... | ..... | GLDW | G..... | TIGF |
| stpy | MMETSAAIMA | QLGLEP.V.. | ..... | ..... | SDLS | T..... | LAL |
| stpn | MMETSRAVLT | QLGLEE.V.. | ..... | ..... | SSLE | N..... | LSL |
| stmu | MMTTSNAIME | QLGLAG.Q.. | ..... | ..... | FDLE | G..... | LEL |
| lala | MRATSGKIFE | QLGMDERS.. | ..... | ..... | FSLE | N..... | LSF |
| stau | LTHAPKEIFE | QLNINNPQ.. | ..... | ..... | FMEF | SS.... | LAQY |
| oeoe | LTQAPKKIFD | QLGLPE.V.. | ..... | ..... | EPIS | N..... | LNf |
| thma | MPDTSEEVFR | RVSFEE.... | ..... | ..... | KPSK | EH.... | LENW |
| thth | MPDKMAELRR | ALGLKEEV.. | ..... | ..... | RLEE | AE.... | R..W |
| dera | IPTKAKELRE | QLGLGRQG.. | ..... | ..... | YPLQ | AA..... | W |
| stco | MPDTSQKLWD | SLGAEPSLGA | ..... | ..... | LADQHV | QD.... | AADW |
| hepyj99 | MPKSAMKLAS | AFRVE..IT. | ..... | ..... | PNNY | ER.... | FFKA |
| hepy2695 | MPKSAVKLAN | AFNTE..IT. | ..... | ..... | PDNY | ER.... | FFKA |
| caje | LPKSSQKVAL | ALNFE..IS. | ..... | ..... | SANY | TK.... | MILD |
| aqae | TPN.KMKEAL | QM.....LG. | ..... | ..... | EKEF | LK.... | ELKP |
| funu | MPESAQKISN | QLGIDKDIT. | ..... | ..... | NLKF | DD.... | IKEW |
| trer | IPNISNAIYQ | QLGFSNNFND | ..... | ..... | KSAINS | SETFVKQVSW | |
| sy6803 | VPRLSTKIYQ | QLGFTWDFDQ | W..... | ..... | RSPLEQ | AEEFNHRHQS | W |
| arth_1 | APCLSLRIYS | QLGYTEDQFN | ..... | ..... | SITW | S..... | DTKW |
| prma | LPNLSSKIDQ | QLGLLYNEKG | ..... | ..... | SW | K.... | KQLDW |
| caelmt | TPNLADKLLS | RLGVSTTE.. | ..... | ..... | RGLGE | LYFLPRFYGH | |
| hosamt | TPSLADKLLS | RLGVSASE.. | ..... | ..... | RSLGE | LYFLPRFYGH | |
| tarumt | VPEISNKLLS | RLGVQPHE.. | ..... | ..... | RSWTN | LNFLPRFEGK | |
| drmemt | IPQLANRLLD | KLSVPTAQ.. | ..... | ..... | RGWNY | LAESFATSPN | |
| anga2 | VPGLSKQLLD | KLQIVPTA.. | ..... | ..... | RRWND | LQVSFRT... | |
| didimt | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| caabmt | MPQLSKKILD | RLNVSG.... | ..... | ..... | RTSEF | TT.LSADLQY | |
| sacemt | IPSLSQSFLD | RIDVSKEK.. | ..... | ..... | RTINY | AR.LGSDKTY | |
| scpomt | MPTKSTELLD | QLGIPKNQ.. | ..... | ..... | RSLQN | ATNVFEPTEF | |
| lema | MPQKAKEIMD | ALGVPEAA.. | ..... | ..... | R.VGM | ENYLFIVKPK | |
| myge | LVNTASKVFH | LFNFADDA.. | ..... | ..... | CRKDQ | LRDATLLKKI | |
| mypn | LVHTSTQIFD | LFNFSAQA.. | ..... | ..... | RSKTH | LADPQQLQKI | |
| urur | LIEGSKKAVE | QLNFDESf.. | | | LTLAS | LASYDIFNYH | |
| mypu | MPQTSQKLAK | ALGFES.... | | | FEKSK | LEDFKKFDNI | |

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|-------|------------|------------|------------|-------|-------|-------|-------|
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | .YISNLP... | ...NKLSDVS | MLFDRIDL.. | | | | |
| bace2 | .PQNTLP... | ...NRIDSVQ | PLFERIDV.. | | | | |
| baan2 | .PQHTLP... | ...SRIDSVQ | PLFERIDV.. | | | | |
| clpe2 | .FKERKN... | ...IRVNRVE | FLFDKIDK.. | ..... | ..... | ..... | ..... |
| deet | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| codi |A... | ...KPQIVE. | VT.DDMPV.. | ..... | ..... | ..... | ..... |
| thnw | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| thvo | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| pogi | DLLPEGH... | ...VLGNPE. | LLFEKLED.. | ..... | ..... | ..... | ..... |
| bafr | DLLPAGH... | ...QLNKPE. | LLFEKIED.. | ..... | ..... | ..... | ..... |
| cyhu | DLLKAGD... | ...QLGTAE. | LLFDKIED.. | ..... | ..... | ..... | ..... |
| chte | GLKKGHK... | ...LLGSSE. | ILFSKIED.. | ..... | ..... | ..... | ..... |
| chmu |L... | ...DLRSQD. | P..ERLQS.. | ..... | ..... | ..... | ..... |

| | | | | | |
|-------|------------|------------|-------------|------------|------------|
| chtr |L... | ...DLGSQD. | P..DRLQS.. | ..... | ..... |
| chpn |L... | ...ENCNLD. | T..MYARD.. | ..... | ..... |
| fugu | CALGAGH... | ...RVGAVS. | PLFQKLEG.. | ..... | ..... |
| hosa | CTLPAGH... | ...QIGTVS. | PLFQKLEN.. | ..... | ..... |
| anga | TLLPTGH... | ...RIGKPA. | VLFTKIED.. | ..... | ..... |
| drme | LLLPAQH... | ...QIGKPA. | PLFAKLEQ.. | ..... | ..... |
| sace | .AILEGH... | ...NINKAE. | YLFQRIDE.. | ..... | ..... |
| scpo | .CLLPGH... | ...RIGEPE. | YLFTRIDE.. | ..... | ..... |
| didi | .AIPAGH... | ...EISK... | EILPLVKK.. | ..... | ..... |
| arth | DILPPSH... | ...RIGTPQ. | PLFKELEN.. | ..... | ..... |
| orsa | DFVSAGH... | ...KIGKPS. | PLFKELKD.. | ..... | ..... |
| cael | CYLKAGH... | ...KIGQPS. | PLFQKLDP.. | ..... | ..... |
| encu | MRIVDGH... | ...TMGSDIR | PLFEDFTT.. | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | VGERKGL... | ...TQVHPPV | ILFRPLET.. | ..... | ..... |
| bobu | LGTKSGI... | ...KKIEFTE | ILFNKLEQ.. | ..... | ..... |
| cacr | NTLSVGR... | ...PITVPE. | VLFKKIED.. | ..... | ..... |
| suto | LVIKSNH... | ...KINEVS. | VLFKKVEL.. | ..... | ..... |
| suso | LSVNPQH... | ...KIGKVN. | VLFKKLEP.. | ..... | ..... |
| aepe | RPLPGA... | ...RIVRVE. | PLFQKLPD.. | ..... | ..... |
| pyba | PPAVG.K... | ...ALGEVR. | PLFRKITE.. | ..... | ..... |
| pyho | KELPAGH... | ...RVRKAE. | ILFKKVTDEQ | IIYFILNYMG | RNNPEGAKML |
| pyab | RELPAGH... | ...KVRKPE. | ILFKKVTDDQ | IIYFILNYMA | KGNPEGARIL |
| pyfu | TELPAGH... | ...KVRKPE. | ILFKKASDDQ | IIYFILNYMG | RNNPDAAREL |
| meja | R....GN... | ...ELKKPK. | IIFKKIDN.. | ..... | .K..... |
| meth | HELREGQ... | ...VIERAK. | PLFSKITD.. | ..... | ..... |
| arfu | YKVDEVM... | ...KLSKPE. | VPFKVED.. | ..... | .E..... |
| hanrc | LQAPP.A... | ...EFGPEA. | ELFEKIED.. | ..... | .D..... |
| psfl | TLLAN.... | ...HQLNEFK | PLMTRIDP.. | ..... | ..... |
| psae | QTLLAN.... | ...HQLNPFQ | PLMTRIEP.. | ..... | ..... |
| esco | QQPLLG.... | ...HKVNPFK | ALYNRIDM.. | ..... | ..... |
| saty | EQPLLS.... | ...HKVNTFK | ALYNRIDM.. | ..... | ..... |
| yepe | EQPLLG.... | ...HSITAFK | ALFNRIDL.. | ..... | ..... |
| vich | ATPLTD.... | ...HAVTPFK | ALFNRIDP.. | ..... | ..... |
| haein | HQPLLG.... | ...HTLAPFK | ALFSRLEK.. | ..... | ..... |
| acac | AQPLLN.... | ...HPIAPFK | ALFSRLDG.. | ..... | ..... |
| pamu | NRPLLN.... | ...HAILPFK | ALAQRLLD.. | ..... | ..... |
| neme | RETLGK.... | ...HAINKYE | HLMQRVEQ.. | ..... | ..... |
| nogo | RETLGE.... | ...HAINKYE | HLMQRVEQ.. | ..... | ..... |
| xyfa | NQPLIGG... | ...HTIHPYS | PLFTRIDK.. | ..... | ..... |
| buAPS | KKPLLS.... | ...HQINKFF | PLYKRIDV.. | ..... | ..... |
| sime | ..LVSG.... | ...TPLEAPK | PVFPRYVAP.. | ..... | ..... |
| agtu | ..LAPG.... | ...TPLEAPK | PVFPRYVAP.. | ..... | ..... |
| brsu | ..LAGG.... | ...TDLPAQ | PVFPRYVEA.. | ..... | ..... |
| melo | ..LVPG.... | ...TALPAPE | GVFPRYVEQ.. | ..... | ..... |
| rhpa | ..IVPG.... | ...TPLPAPA | PIFPRYVEP.. | ..... | ..... |
| mytu | ..LTPG.... | ...TALPPPT | GVFPRYQPP.. | ..... | ..... |
| rhru | ..LAPG.... | ...TVLPKPE | GIFPRHVVD.. | ..... | ..... |
| noar | ARVATG.... | ...ERLAQPM | PAFPRLELP.. | ..... | ..... |
| rico | ..LTAG.... | ...SNILEPT | IIFPKFE... | ..... | ..... |
| ripr | ..LKAG.... | ...SNILEPS | IIFPKFN... | ..... | ..... |
| plyo | ..LQEG.... | ...VIINNDN | VLFKKFEVE.. | ..... | ..... |

| | | | | | |
|-----------|------------|-------------|-------------|-------|-------|
| plfa | ..LTEG.... | ...VIINNDN | ILFKKYEVE. | ..... | ..... |
| clpe1 | NGTVAG.... | ...DKVVKGD | VIFPRIDVE. | ..... | ..... |
| clac | DGTRAG.... | ...TKVSKGE | VIFPRIDVD. | ..... | ..... |
| liin | GEIPEGT... | ...TVVKKGT | PIFPRLDAE. | ..... | ..... |
| limo | GEIPAGT... | ...TVVKKGT | PIFPRLDAE. | ..... | ..... |
| baan1 | GCIPAG.... | ...TKVEKGQ | PIFPRLEMD. | ..... | ..... |
| bacel | GCIPAG.... | ...TKVEKGN | PIFPRLEME. | ..... | ..... |
| basu | GQLKD..... | ...TKVQKGE | PLFPRLEAE. | ..... | ..... |
| bast | GLIPEG.... | ...TNVQKGE | PLFPRLDIG. | ..... | ..... |
| baha | GQIPGN.... | ...TNVQKGQ | PLFPRLDVE. | ..... | ..... |
| enfa | GEFPTDV... | ...TVTSKGT | PIFPRLEIE. | ..... | ..... |
| ocih | GNFPEPT... | ...TVVKKGT | PIFPRLDLD. | ..... | ..... |
| stpy | ADFPANT... | ...KVVAKGT | PIFPRLDME. | ..... | ..... |
| stpn | ADFPADV... | ...TVVAKGT | PIFPRLNME. | ..... | ..... |
| stmu | AGLPTGV... | ...KVIKGT | PIFPRLDMD. | ..... | ..... |
| lala | G.YSFTH... | ...PVVAKGQ | PIFPRLDVE. | ..... | ..... |
| stau | GVLTEPI... | ...MVTGQPK | PIFPRLDSE. | ..... | ..... |
| oeoe | ADIPSGI... | ...KVVEHPT | PLFPRLDVK. | ..... | ..... |
| thma | GVLKPG.... | ...STVIHGE | PLFKKIDAK. | ..... | ..... |
| thth | GLAEPR.... | ...PIPEEAP | VLFPKKE... | ..... | ..... |
| dera | GLTPAG.... | ...TRVQGGG | ILFPKPEPK. | ..... | ..... |
| stco | GRLPAG.... | ...ATVTKGA | VLFPRL... | ..... | ..... |
| hepyj99 | KKLQD..... | ...MVLQDTE | PLFSKIEKI. | ..... | ..... |
| hepy26695 | KKLQD..... | ...MILQDTE | PLFSKMEKI. | ..... | ..... |
| caje | NELLD..... | ...FKANPCE | ALFPKVEKA. | ..... | ..... |
| aqae | YSKNT..... | ...YKLGERR | ILFPKREG... | ..... | ..... |
| funu | SIFKEG.... | ...HKLGEAS | PIFPRIEIE. | ..... | ..... |
| trer | GALPGN.... | ...QLLGQPQ | PIFQRIDMI. | ..... | ..... |
| sy6803 | GQLGAN.... | ...QNLPPAQ | PIFTKLELP. | ..... | ..... |
| arth_1 | GGLKGG.... | ...QVMEQAS | PVFARIELN. | ..... | ..... |
| prma | GKLIHE.... | ...SILPAPN | PVIEKLEYE. | ..... | ..... |
| caelmt | PCPFEG.... | ...RKLGPDTG | LLFPR.LDQ. | ..... | ..... |
| hosamt | PCPFEG.... | ...RRLGPETG | LLFPR.LDQ. | ..... | ..... |
| tarumt | DCPFEG.... | ...RALGSDSG | VLFSR.LES. | ..... | ..... |
| drmemt | SSNSPAGLGE | SRQLDGQ TSA | LLFQRILEE. | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | GSGANS.... |KSH | KVPLEKIAP. | ..... | ..... |
| sacemt | GKQSNK.... |KGR | EVPLKKIPF. | ..... | ..... |
| scpomt | TFHSGN.... |NSH | LFDKRTQ... | ..... | ..... |
| lema | GTKIAG.... |LAEGQ | VVFQKVTLP. | ..... | ..... |
| myge | IISNSM.... |E | VLFKRVD... | ..... | ..... |
| mypn | SLAPVI.... |Q | PLFKRLD... | ..... | ..... |
| urur | KVNDS.... |K | PIFARIIVE. | ..... | ..... |
| mypu | KIEKI..... |E | NLFNRIKL.. | ..... | ..... |

1001

1050

| | | | | | |
|-------|---------|------------|----------|--------|-------|
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 |KK | IDEEVLELQQ | T.....SS | R..... | ..... |
| bace2 |KQ | IECEIEKLYG | A.....VK | ..... | ..... |
| baan2 |KQ | IECELEKLYG | A.....VK | ..... | ..... |
| clpe2 |KV | AIEELNRLKN | K.....KI | ..... | ..... |

| | | | | | | |
|-------|------------|------------|-------------|------------|------------|-------|
| deet | ..... | FGSEIEKDG. | ..... | ..... | ..... | ..... |
| codi |EP | IGVGIPEAGQ | T.....YP | VIMGDYAAQQ | AR..... | ..... |
| thnw | ..... | IPFAIGQS.. | ..... | ..... | ..... | ..... |
| thvo | ..... | VNMDIDSS.. | ..... | ..... | ..... | ..... |
| pogi |SV | IDAQIQKLQD | T.....KL | ANEKAAHQAA | PI..... | ..... |
| bafr |AT | IEAQVQKLLD | T.....KK | ANEEANYKAK | PI..... | ..... |
| cyhu |AT | IEAQVKKLED | T.....KQ | ANLLANAEVK | PL..... | ..... |
| chte |KD | IEPEMKKIEA | L.....LA | EAEQREAAKQ | PVPMT..... | ..... |
| chmu |IW | TEAFFDYSE. | ..... | ..... | .E..... | ..... |
| chtr |LW | TDSFFDYSE. | ..... | ..... | .E..... | ..... |
| chpn |LW | KEEILDVIN. | ..... | ..... | .E..... | ..... |
| fugu |DQ | IEALKKRFSG | Q.....QA | ATAPAPAAEA | T..... | ..... |
| hosa |DQ | IESLRQRFGG | G.....QA | KTSPKPAVVE | T..... | ..... |
| anga |AR | IEELKQKYGG | V.....QQ | DKDKSPAPVK | APQGFTS... | ..... |
| drme |SF | IDELKGKYGG | A.....Q. | ..... | ..... | ..... |
| sace |KK | IDEWRAKYGG | Q.....QV | ..... | ..... | ..... |
| scpo |SM | EEEWRSKYGG | N.....GS | N..... | ..... | ..... |
| didi |IE | ADDLK..... | ..... | ..... | ..... | ..... |
| arth |DE | VARYREKFAG | S.....QS | DR....RARD | EAAN..... | ..... |
| orsa |EE | VESFRNKFAG | S.....QA | ERSSKAQADA | EAKK..... | ..... |
| cael |AQ | IAEFKAKFGG | S.....QD | AQSSAPKTAE | KPKQQKKQAP | ..... |
| encu |EQ | IEEMK.RYDR | P.....QS | TGCSK..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... | ..... |
| trpa |ET | IAAYRARYAG | T.....AR | DGAGVSVPRT | AQMPT.G... | ..... |
| bobu |KK | INNLKLYS. | ..... | .G..... | ..... | ..... |
| cacr |EQ | IAEWTARFGG | A.....E. | ..... | ..... | ..... |
| suto |NE | ..... | ..... | ..... | ..... | ..... |
| suso |EF | ESKIKDKLEK | I.....RK | DIEKIRPTLL | K..... | ..... |
| aepe |DF | LERVDEIVED | A.....RR | RAREKRPPLL | RD..... | ..... |
| pyba |EE | VKALLAKLEE | L.....RN | QKYSRKYPWE | QVVI..... | ..... |
| pyho | LEKYYKREDV | IKVAKEKFGE | E.SKIILKRI | YKDIKLEEGK | EEKEME.... | ..... |
| pyab | LDKYYKREDV | IRVAKEKFGD | E.AEVLRRV | YKDIKLKEKK | EGKEM.... | ..... |
| pyfu | LEKYYKLEDV | EKVAIEKFGE | EDGRFMLKKI | FKEKYKGEKK | GEQKMQ.... | ..... |
| meja |K.... | IEEMK..... |KKL | YENKK.EETK | GGEKME.... | ..... |
| meth | ..... | ..... | .....EA | IEEEKAKLIE | EDDEVE.... | ..... |
| arfu |VIEKL | QKVMKRFRG | E.....GEK | MEQK..... | ..... | ..... |
| hanrc |RVTEL | DEALAAKIEA | ASSEDADGEG | MADETADDGI | ELEPLAE... | ..... |
| psfl |VK | VQAMTDASKE | DLTASQT.DT | GAAAPAGNGE | ...LA..... | ..... |
| psae |AK | VEAMIEASKE | DLAA....AS | ...QPAGNGE | ...LV..... | ..... |
| esco |RQ | VEALVEASKE | EVKAAAAPVT | GP..... | ...LA..... | ..... |
| saty |KQ | VEALVEASKE | EVK..... | ..... | ..... | ..... |
| yepe |DK | VNEMVASSKE | DMAPATR.VT | GP..... | ...LA..... | ..... |
| vich |KQ | VEAMIEASKA | EAAAEEKAAAD | AAKPKSAETE | ...LS..... | ..... |
| haein |KQ | IDAVVEETKA | LFAAANK.AA | EKTEAKPTAL | ...SA..... | ..... |
| acac |KQ | IEAMIEASKA | ENAQVNAPAT | AKSAVKNTGE | ...SAGG... | ..... |
| pamu |KQ | IEAIVNETKE | QFVAQQA.LE | QKNSAKAEP | ...SQ..... | ..... |
| neme |KQ | VDDLIEANKQ | SIQTTAPAA | E.....E | ...SQ..... | ..... |
| nogo |KQ | VDDLIEANKQ | SIQTASAP.V | E.....E | ...GK..... | ..... |
| xyfa |KV | IEVMINASKD | TLAPPPASAK | QQNASMSNTA | PPPTAEK... | |
| buAPS |EK | MFEFMNOCR. | | | | |
| sime |EA | | | | | |
| agtu |EA | | | | | |

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brsu .....DE QN.....
melo .....PG ANA.....
rhpa .....AT A.....
mytu .....QP PEGK.....
rhru .....DE GAA.....
noar .....EE EGSA.....
rico .....
ripr .....
plyo .....TA KIKIQKVIMK LSKVIKVIEH GELKNSTIYE IETDDGKYIA
plfa .....TA KIKLQKVIIR VCKIVNIINT ESSQNTTICE IEVDNDKITA
clpel .....EK LAELEALKPA PV.....K PANE.....E
clac .....KK IEELNKLKEE QL.....K AT.....R
liin .....VE VTYIQDEMKG SA.....P APAE.....E
limo .....VE VTYIQDEMKG SA.....P APAE.....E
baan1 .....VE VAYIKEQMKA SA.....P KVEE.....K
bacel .....VE VAYIKEQMKA SA.....P KVEE.....K
basu .....EE IAYIKGKMQG SA.....P AKEE.....T
bast .....VE VEYIKAHMQG GK.....PAEA.....A
baha .....EE VAHIKSLMGG SK.....K PEEA.....P
enfa .....TE VTYIQKKMSQ SE.....S ATEED.....IKWN
ocih .....EE AAYIRDQMAN GA.....NA ASSED.....ETGDWD
stpy .....AE IDYIKAQMGD SS.....A ISQE.....KEWV
stpn .....EE IAYIKEQME GN.....K PAVE.....KEWN
stmu .....EE IAYIKEQMGD NS.....A IAQEE.....E KEWN
lala .....EE VAYIKLQMAG G.....VLPE.....KEWV
stau .....AE IAYIKESMQP P.....ATEE.....E
ocoe .....KE VEFISGLVQK DT.....K GKGRA.....R MEAA
thma .....DF KKVVETVSAE QN.....
thth .....AKVEAKP.....
dera .....AD ETKNAEAKPP KP.....Q AKKEK.....K TVTDTAPAKT
stco .....
hepyj99 .....EK IEKIEKIEKI EKGEALAEK AEKK.....E
hepy26695 .....EK TEKAGEASPE KN.....EK EKKD.....A
caje .....LL KQEIKEEP.. K.....
aqae .....
funu .....KEEIVETK.. ..KE.....L
trrer .....
sy6803 .....AE E.....
arth_1 .....PE KEEDEKKPKV G.....
prma .....
caelmt .....SR TRLVKAHRT.....
hosamt .....SR TWLVKAHRT.....
tarumt .....QR ADQQKNRKME KGSNLK.....
drmemt .....TS AKEVKEQKPQ PAKRSKSKKK ERRETMS.....
anga2 .....
didimt .....
caabmt .....RD IK.....
sacemt .....RL QEEQTNMRS.....
scpomt .....
lema .....TE EGERSSKGQ.....
myge .....
mypn .....

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|-------|------------|------------|------------|-------------|------------|
| urur |KQ | | | | |
| mypu | | | | | |
| | 1051 | | | | 1100 |
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | | | | | |
| bace2 | | | | | |
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
| codi | | | | | |
| thnw | | | | | |
| thvo | | | | | |
| pogi | | | | | |
| bafr | ..... | ..... | ..... | ..... | ..... |
| cyhu | ..... | ..... | ..... | ..... | ..... |
| chte | ..... | ..... | ..... | ..... | ..... |
| chmu | ..... | ..... | ..... | ..... | ..... |
| chtr | ..... | ..... | ..... | ..... | ..... |
| chpn | ..... | ..... | ..... | ..... | ..... |
| fugu | ..... | ..... | ..... | ..... | ..... |
| hosa | ..... | ..... | ..... | ..... | ..... |
| anga | ..... | ..... | .....L | KDAQKAVDEQ | AAKVRKIKSS |
| drme | ..... | ..... | ..... | ..... | ..... |
| sace | ..... | ..... | ..... | ..... | ..... |
| scpo | ..... | ..... | ..... | ..... | ..... |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | .....L | ADQLNK..... | ..... |
| orsa | ..... | ..... | .....V | ADKLKG..... | ..... |
| cael | TKDKKGDKKM | ASTAAFVELE | QGAKVISQLI | AQNLKKFDQA | KALFTRNQLQ |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | ..... | ..... | ..... | ..... | ..... |
| bobu | ..... | ..... | ..... | ..... | ..... |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | ..... | ..... | ..... | ..... | ..... |
| pyab | ..... | ..... | ..... | ..... | ..... |
| pyfu | ..... | ..... | ..... | ..... | ..... |
| meja | ..... | ..... | ..... | ..... | ..... |
| meth | ..... | ..... | ..... | ..... | ..... |
| arfu | ..... | ..... | ..... | ..... | ..... |
| hanrc | ..... | ..... | ..... | ..... | ..... |
| psfl | ..... | ..... | ..... | ..... | ..... |
| psae | ..... | ..... | ..... | ..... | ..... |
| esco | ..... | ..... | ..... | ..... | ..... |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..... | ..... |
| vich | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|-----------|---------------|-------|-------|-------|-------|
| haein | ..... | ..... | ..... | ..... | ..... |
| acac | ..... | ..... | ..... | ..... | ..... |
| pamu | ..... | ..... | ..... | ..... | ..... |
| neme | ..... | ..... | ..... | ..... | ..... |
| nogo | ..... | ..... | ..... | ..... | ..... |
| xyfa | ..... | ..... | ..... | ..... | ..... |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | LLNLPHNEN. | ..... | ..... | ..... | ..... |
| plfa | VLYLPYNNNN N. | ..... | ..... | ..... | ..... |
| clpel | LVENP..... | ..... | ..... | ..... | ..... |
| clac | .KMQP..... | ..... | ..... | ..... | ..... |
| liin | TAEVEAL... | ..... | ..... | ..... | ..... |
| limo | VAEVEAL... | ..... | ..... | ..... | ..... |
| baan1 | KEEEP..... | ..... | ..... | ..... | ..... |
| bacel | KEEEP..... | ..... | ..... | ..... | ..... |
| basu | KEEEPQEVd. | ..... | ..... | ..... | ..... |
| bast | KEEKQAA... | ..... | ..... | ..... | ..... |
| baha | KDEKEES... | ..... | ..... | ..... | ..... |
| enfa | PEETTLVST. | ..... | ..... | ..... | ..... |
| ocih | PNETDLVSE. | ..... | ..... | ..... | ..... |
| stpy | PEEVALKS.. | ..... | ..... | ..... | ..... |
| stpn | PDEVELKL.. | ..... | ..... | ..... | ..... |
| stmu | PTTVELKN.. | ..... | ..... | ..... | ..... |
| lala | PEEVELNL.. | ..... | ..... | ..... | ..... |
| stau | KEEIP..... | ..... | ..... | ..... | ..... |
| oeoe | KEKAREELQN | ..... | ..... | ..... | ..... |
| thma | ..... | ..... | ..... | ..... | ..... |
| thth | ..... | ..... | ..... | ..... | ..... |
| dera | TEQKPEAAAP A. | ..... | ..... | ..... | ..... |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | KEKAPPT... | ..... | ..... | ..... | ..... |
| hepy26695 | KEKAPLK... | ..... | ..... | ..... | ..... |
| caje | KEESP.K... | ..... | ..... | ..... | ..... |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | KIENP..... | ..... | ..... | ..... | ..... |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarumt | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|--------|-------|-------|-------|-------|-------|
| drment | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... |
| lema | ..... | ..... | ..... | ..... | ..... |
| myge | ..... | ..... | ..... | ..... | ..... |
| mypn | ..... | ..... | ..... | ..... | ..... |
| urur | ..... | ..... | ..... | ..... | ..... |
| mypu | ..... | ..... | ..... | ..... | ..... |

1101

1150

| | | | | | |
|-------|------------|------------|------------|-----------|------------|
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | ..... | ..... | ..... | ..... | ..... |
| bace2 | ..... | ..... | ..... | ..... | ..... |
| baan2 | ..... | ..... | ..... | ..... | ..... |
| clpe2 | ..... | ..... | ..... | ..... | ..... |
| deet | ..... | ..... | ..... | ..... | ..... |
| codi | ..... | ..... | ..... | ..... | ..... |
| thnw | ..... | ..... | ..... | ..... | ..... |
| thvo | ..... | ..... | ..... | ..... | ..... |
| pogi | ..... | ..... | ..... | ..... | ..... |
| bafr | ..... | ..... | ..... | ..... | ..... |
| cyhu | ..... | ..... | ..... | ..... | ..... |
| chte | ..... | ..... | ..... | ..... | ..... |
| chmu | ..... | ..... | ..... | ..... | ..... |
| chtr | ..... | ..... | ..... | ..... | ..... |
| chpn | ..... | ..... | ..... | ..... | ..... |
| fugu | ..... | ..... | ..... | ..... | ..... |
| hosa | ..... | ..... | ..... | ..... | ..... |
| anga | GADRTVWQPE | VNILLELKKQ | L..... | ..... | ..... |
| drme | ..... | ..... | ..... | ..... | ..... |
| sace | ..... | ..... | ..... | ..... | ..... |
| scpo | ..... | ..... | ..... | ..... | ..... |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | ..... | ..... | ..... | ..... | ..... |
| orsa | ..... | ..... | ..... | ..... | ..... |
| cael | RLDGENKQLT | IDVKTLOHQL | IELETAAGIK | QVPKPVVSC | PTPTSTPASG |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | ..... | ..... | ..... | ..... | ..... |
| bobu | ..... | ..... | ..... | ..... | ..... |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | ..... | ..... | ..... | ..... | ..... |
| pyab | ..... | ..... | ..... | ..... | ..... |
| pyfu | ..... | ..... | ..... | ..... | ..... |
| meja | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|-----------|-------|-------|-------|-------|-------|
| meth | ..... | ..... | ..... | ..... | ..... |
| arfu | ..... | ..... | ..... | ..... | ..... |
| hanrc | ..... | ..... | ..... | ..... | ..... |
| psfl | ..... | ..... | ..... | ..... | ..... |
| psae | ..... | ..... | ..... | ..... | ..... |
| esco | ..... | ..... | ..... | ..... | ..... |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..... | ..... |
| vich | ..... | ..... | ..... | ..... | ..... |
| haein | ..... | ..... | ..... | ..... | ..... |
| acac | ..... | ..... | ..... | ..... | ..... |
| pamu | ..... | ..... | ..... | ..... | ..... |
| neme | ..... | ..... | ..... | ..... | ..... |
| nogo | ..... | ..... | ..... | ..... | ..... |
| xyfa | ..... | ..... | ..... | ..... | ..... |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | ..... | ..... | ..... | ..... | ..... |
| plfa | ..... | ..... | ..... | ..... | ..... |
| clpel | ..... | ..... | ..... | ..... | ..... |
| clac | ..... | ..... | ..... | ..... | ..... |
| liin | ..... | ..... | ..... | ..... | ..... |
| limo | ..... | ..... | ..... | ..... | ..... |
| baan1 | ..... | ..... | ..... | ..... | ..... |
| bacel | ..... | ..... | ..... | ..... | ..... |
| basu | ..... | ..... | ..... | ..... | ..... |
| bast | ..... | ..... | ..... | ..... | ..... |
| baha | ..... | ..... | ..... | ..... | ..... |
| enfa | ..... | ..... | ..... | ..... | ..... |
| ocih | ..... | ..... | ..... | ..... | ..... |
| stpy | ..... | ..... | ..... | ..... | ..... |
| stpn | ..... | ..... | ..... | ..... | ..... |
| stmu | ..... | ..... | ..... | ..... | ..... |
| lala | ..... | ..... | ..... | ..... | ..... |
| stau | ..... | ..... | ..... | ..... | ..... |
| oeoe | ..... | ..... | ..... | ..... | ..... |
| thma | ..... | ..... | ..... | ..... | ..... |
| thth | ..... | ..... | ..... | ..... | ..... |
| dera | ..... | ..... | ..... | ..... | ..... |
| stco | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | ..... |
| hepy26695 | ..... | ..... | ..... | ..... | ..... |
| caje | ..... | ..... | ..... | ..... | ..... |

```

    aqae .....
    funu .....
    trer .....
sy6803 .....
    arth_1 .....
    prma .....
    caelmt .....
    hosamt .....
    tarumt .....
    drmemt .....
    anga2 .....
    didimt .....
    caabmt .....
    sacemt .....
    scpomt .....
    lema .....
    myge .....
    mypn .....
    urur .....
    mypu .....

```

1151

1200

```

    mask ~~~~~
    stpn2 .....
    bace2 .....
    baan2 .....
    clpe2 .....
    deet .....W
    codi .....W
    thnw .....Y
    thvo .....F
    pogi .....AEDI AFEDFLKLDI
    bafr .....RANI EFDDFMKLDI
    cyhu .....KENV SFDDFAKMDI
    chte .....FKPEI TFDDFQKIDL
    chmu .....
    chtr .....
    chpn .....
    fugu .....
    hosa .....
    anga .....QTLSQPR TSESAATAAP GEKPAKQAPK QAPKPATGGA
    drme .....
    sace .....
    scpo .....
    didi .....
    arth .....TKLSDAK KQKASSKGGG KPKPQPAADR EITMARLDIR
    orsa .....TKLSDGG QKKEQKKQSG GSKSK.NAEV DVTVAKLDIR
    cael IITEAPKKEA PSTPAPSEPK KAKEQKKGKG GAAAA.PVDD TIDVGRLLDMR
    encu .....
    trde .....
    trpa .....MNKKETD AQQKKEEREM PPPSDTARLS AFFSERVVLK
    bobu .....D KNMKENEQAE NLPIAKEQPE NLFREKVLRLR

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| | | | | | |
|-------|-------|-------|-------|-------------|------------|
| cacr | | | | | |
| suto | | | | | |
| suso | | | | | |
| aepe | | | | | |
| pyba | | | | | |
| pyho | | | |YV | KFEDFAKLDL |
| pyab | | | |YV | KFDDFAKLDL |
| pyfu | | | |YV | SFEEFSKIDL |
| meja | ..... | ..... | ..... | .....QI | DISYLEKIDL |
| meth | ..... | ..... | ..... | .....TV | TIDDFTTMDI |
| arfu | ..... | ..... | ..... | .....EEI | SIEDFQKLDI |
| hanrc | ..... | ..... | ..... | .....DDI | SFEEFQALDL |
| psfl | ..... | ..... | ..... | ..KDPLSPEI | DFDTFAAVDL |
| psae | ..... | ..... | ..... | ..KEPIAAEI | DFDAFAAVDL |
| esco | ..... | ..... | ..... | ..DDPIQETI | TFDDFAKVDL |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | ..... | ..... | ..... | ..DDPIQETI | SFDDFAKVDM |
| vich | ..... | ..... | ..... | ..KDPLAAEI | EFDDFAKVDL |
| haein | ..... | ..... | ..... | ..VEPIAETI | TIDDFAKLDM |
| acac | ..... | ..... | ..... | ..IEPIAETI | TIDDFAKLDL |
| pamu | ..... | ..... | ..... | ..VEPIAETI | SIEDFAKLDL |
| neme | ..... | ..... | ..... | ..YEKVAEQA | SFDDFMKIDM |
| nogo | ..... | ..... | ..... | ..YEKVAEQA | GFDDFMKIDM |
| xyfa | ..... | ..... | ..... | ..PETTAPTI | GIDDFAKLDL |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | ..... | ..... | ..... | .....HINTL | TVAIMNIKPL |
| plfa | ..... | ..... | ..... | .....KLVNLL | TLAILNIKPL |
| clpel | ..... | ..... | ..... | .....IKEEI | TIDDFDKIDL |
| clac | ..... | ..... | ..... | .....LKPEI | SIDDVDKLDL |
| liin | ..... | ..... | ..... | .....ETPQI | GIEDFDKIDL |
| limo | ..... | ..... | ..... | .....ETPQI | GIEDFDKIDL |
| baan1 | ..... | ..... | ..... | .....KAEEI | TIDDFFKVEL |
| bacel | ..... | ..... | ..... | .....KAEEI | TIDDFFKVEL |
| basu | ..... | ..... | ..... | .....RLPEI | TIDQFMDVEL |
| bast | ..... | ..... | ..... | .....RAEEI | SIDDFAKVDL |
| baha | ..... | ..... | ..... | .....DEI | TIDDFSVEL |
| enfa | ..... | ..... | ..... | .....KEKQI | KYDDFDKVEL |
| ocih | ..... | ..... | ..... | .....KEKQI | KYDVFDKVEL |
| stpy | | | |EKDVI | TFETFDVEI |
| stpn | | | |NKDEI | KFEDFDKVEI |
| stmu | | | |EKKAI | KFDDFDKLEI |
| lala | | | |TLPQI | KFDDFEKIEL |

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|-----------|-------|-------|-------|-------|-------------|------------|
| stau | | | | |SKPQI | DIKDFDKVEI |
| oeoe | | | | |ETVEEI | NYDDFAKLRL |
| thma | | | | |AI | TIDDFSKVDL |
| thth | | | | |KEEAWI | GIEDFAKVEL |
| dera | ..... | ..... | ..... | ..... | .....QNDGLI | SIDDFAKIDL |
| stco | ..... | ..... | ..... | ..... | ..... | ..... |
| hepyj99 | ..... | ..... | ..... | ..... | .....QENYI | SIEDFKKVEI |
| hepy26695 | ..... | ..... | ..... | ..... | .....QENYI | GIEDFKKVEI |
| caje | ..... | ..... | ..... | ..... | .....I | KIDDFAKIEI |
| aqae | ..... | ..... | ..... | ..... | ..... | ..... |
| funu | ..... | ..... | ..... | ..... | .....V | DIKEFNKIEI |
| trer | ..... | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... | ..KKTGKAKV |
| prma | ..... | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... | ..... |
| tarumt | ..... | ..... | ..... | ..... | ..... | ..... |
| drmemt | ..... | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... | ..... |
| lema | ..... | ..... | ..... | ..... | ..... | ..... |
| myge | ..... | ..... | ..... | ..... | ..... | ..... |
| mypn | ..... | ..... | ..... | ..... | ..... | ..... |
| urur | ..... | ..... | ..... | ..... | ..... | ..... |
| mypu | ..... | ..... | ..... | ..... | ..... | ..... |

1201

1250

| | | | | | | |
|-------|------------|-------------|-------------|------------|------------|-------|
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | ..... | ..... | ..... | ..... | ..... | ..... |
| bace2 | ..... | ..... | ..... | ..... | ..... | ..... |
| baan2 | ..... | ..... | ..... | ..... | ..... | ..... |
| clpe2 | ..... | ..... | ..... | ..... | ..... | ..... |
| deet | VLKMPVAGQ. | EMIPPEPLFK | KLEDSVVE.E | ETARM..... | ..... | ..... |
| codi | ARIDVQPGT. | ALSKPKPLIA | KLDPELGE.T | GPEWAPVNP. | ..... | ..... |
| thnw | RHLYEMHAF. | SVHRGAIPIFE | KIDLESLV.S | KLN..... | ..... | ..... |
| thvo | SILNSINDF. | SVKPSRIPFE | KLDIDKLLK.L | ..... | ..... | ..... |
| pogi | RVGTVLECE. | KVPKADKLLR | FRIDDGLS.G | RTIVSGIAKH | YA.PEELVGK | ..... |
| bافر | RVGTVLECQ. | KVPKADKLLQ | FKIDDGLE.T | RTIVSGIAQH | YK.PEELVGK | ..... |
| cyhu | RVATIIAAE. | KVAKTKKLLK | LTLLKTGID.E | RTVVSGIAEH | FE.PEAIIGQ | ..... |
| chte | RVAKVVACE. | PVKKANKLLK | LQLQVGSE.Q | RQVLSGIAQY | FT.PEQMVGK | ..... |
| chmu |SF. | SLKEPELLFT | VVE..... | ..... | ..... | ..... |
| chtr |KF. | SLKEPELLFT | MVE..... | ..... | ..... | ..... |
| chpn |EF. | HLKSPRLLFT | TVE..... | ..... | ..... | ..... |
| fugu | ..... | AAVADPERAK | QLSQAVVE.Q | GEKVRNLKAQ | KA.EKALITA | ..... |
| hosa | ..... | VTTAKPQQIQ | ALMDEVTK.Q | GNIVRELKAQ | KA.DKNEVAA | ..... |
| anga | AVSTPPATN. | TTAADPSDVK | ALEEEIAQ.Q | GNKVRKLKEA | NS.DKSVWQP | ..... |
| drme | ..... | ..... | ..... | ..... | ..... | ..... |
| sace | ..... | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|-------|------------|------------|------------|------------|------------|
| scpo | ..... | ..... | ..... | ..... | ..... |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | VGKIVKAEK. | HPKADALYVE | EIDVGGGE.I | RTVVSGLVKY | IP.LEEQNR |
| orsa | VGLIRKAQK. | HPDADSLYVE | EIDVGEEA.P | RTVVSGLVKF | IP.LEEQNR |
| cael | VGRIIKCEK. | HPDADALYVE | QIDVGESA.P | RTVVSGLVRH | VP.LDQMQR |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | VARVLQVER. | HPNADMLFVE | TLDDGSGV.E | RVIVSGLVPY | MA.ADALRGA |
| bobu | VVKINKIER. | NPEAKNLFIL | KLDDGTNK.D | KQIVSGLEGY | YT.EEELLGK |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | RVGKIIEVK. | DHPNADKLYI | VKVDLGKE.V | RTLVAQLKKY | YK.PEELLNK |
| pyab | RVGKIIEVK. | DHPNADKLYV | VKVDLGDE.V | RTLVAQLKKY | YK.PEELNLR |
| pyfu | RIGKIVEVQ. | DHPNADKLYV | VKVDLGGE.I | RTLVAQLKKY | YK.PEELNLR |
| meja | RVGEVVEAE. | DIPKSKKLLK | LMVDLGDE.K | RQIVSGIKGY | YK.PEDLVGK |
| meth | RVGVIRSAE. | RIEGSDKLLK | LIIDVGER.E | MQVVAGLAEK | YS.PEDLVER |
| arfu | RIGRVLKAE. | KVKKSKKLIK | LIIDIGDE.Q | RQIVSGIAED | YT.PEELEGK |
| hanrc | RVGEVVEAE. | GIEGADDLAR | LEVDIGHE.V | RQIVAGIKQL | HD.LDALPGT |
| psfl | RVALIVKAE. | HVEGADKLLR | LTLDIGDE.Q | RNVFSGIKSA | YDPSKLDGR |
| psae | RIALIEKCE. | FVEGADKLLR | LSLDIGDA.K | RNVFSGIKSA | YDPSALEGR |
| esco | RVALIENAE. | FVEGSDKLLR | LTLDLGGE.K | RNVFSGIRSA | YDPPQALIGR |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | RIALIQQAE. | FVEGSDKLLK | LTLELGGE.T | RQVFSGIRSA | YDPPKALEGR |
| vich | RIAKILSCE. | AVEKSDKLLK | FELDIGGE.T | RQVFSGIKSA | YQ.PEDLIGK |
| haein | RVAKVLKCE. | AVPESNKLLR | FELDLGDH.T | RQVFSGIKAA | YKPEELEGR |
| acac | RVAKVLKCE. | AVPESNKLLR | FELDLGDH.K | RQVFSGIKAA | YDKPEELEGR |
| pamu | RVAKVMKCE. | AVPESNKLLR | FELDLGDH.T | RQVFSGIKEA | YNNPAELEGR |
| neme | RVAKVLNCE. | AVEGSTKLLK | FDLDFGFE.K | RIIFSGIAAS | YNNPAELNGR |
| nogo | RVAKVLNCE. | AVEGSTKLLK | FDLDFGFE.K | RIIFSGIAAS | YNNPAELNGR |
| xyfa | RIGKVLVCE. | YVEGSDKLLR | FELDAGPLGK | RQIFSGIRAS | YSNPETLIGR |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | TINNITVTAI | IPVHKEIFK | FHPDENIPVG | TLVHAQNYKT | LVKQRDNLTK |
| plfa | TINNITVNAI | IPVHRKEIFT | FPIEERIPTG | TLIQGNKYKT | LVKQRDNLTK |
| clpel | RVVKVLECEP | VKKA.KKLLK | LKVDLG.GEE | RQVISGIAQY | YK.PEELVVK |
| clac | RVVKVLECEP | VKKS.KKLLK | LKVELG.GEE | RQVLSGISQF | YK.PEDLIGK |
| liin | RVAEVKQVVK | VKKA.DKLLC | FQLDLGEGKL | RQVLSGIAEF | YQ.PEELIGK |
| limo | RVAEVKQVVK | VKKA.DKLLC | FQLDLGEGKL | RQVLSGIAEF | YQ.PEELIGK |
| baan1 | RVAEVLSAEP | VKKA.DKLLK | IQLDLG.TEK | RQVVSGIAKF | YS.PEDLKGK |
| bacel | RVAEVLSAEP | VKKA.DKLLK | IQLDLG.TEK | RQVVSGIAKF | YS.PEDLKGK |

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|-----------|------------|------------|------------|------------|-------------|
| basu | RVAEVIEAEP | VKKA.DRLLK | LQLDLG.FEK | RQVVSGIAKH | YT.PEELVGK |
| bast | RVAEVVQPER | MKNA.DKLLK | LQLDLG.GEK | RQVISGIAEF | YK.PEELIGK |
| baha | RIAEVIDAEP | VKKA.DRLLK | IQLDLG.YEK | RQVVSGIAKY | YS.PSDLIGK |
| enfa | KVAEVIDCKK | VKGA.DKLLQ | FRLDAGDENH | RQILSGIAEF | YDPAAALIGK |
| ocih | KVAEVKDCSK | VEGA.DKLLK | FRLDAGDNGD | RQILSGIAEY | YSEPEQLIGK |
| stpy | RVAEVKEVSK | VEGS.EKLLR | FRVDAGDGQD | RQILSGIAKF | YPNEQELVGK |
| stpn | RVAEVKEVSK | VEGS.DKLLQ | FRLDAGDGED | RQILSGIAKY | YPNEQELVGK |
| stmu | RVAEVKEVSK | VKGS.DKLLK | FRLDAGDGED | RQILSGIAKY | YPNELDLVGK |
| lala | KVAEVLEVEP | VEGS.DKLLR | FKLDAGDSEP | RQILSGIAQF | YPNEQELVGK |
| stau | KAATIIDAEP | VKKS.DKLLK | IQVDLD.SEQ | RQIVSGIAKF | YT.PDDIIGK |
| oeoe | IAGKIKSGEI | LKNS.KKLIK | WQIDDGSEDG | RQILSGIREW | YDPDPSVLVGK |
| thma | RIAKVLEAEK | VPNS.RKLLR | LIIDLK.TEK | RQIVAGIAEH | YR.PEELVGK |
| thth | RVAEVLAEEK | HPNA.DRLLV | LRLSLG.NEE | RTVVSGIAKW | YR.PEELVGK |
| dera | RIAEVVACEA | VEKA.DKLLK | LTVKLG.DET | RTVVSGIRKW | YE.PEALVGR |
| stco |E. | ..... | ..... | ..... | ..... |
| hepyj99 | KVGLIKEAQR | IEKS.NKLLR | LKVLDGENRL | RQIISGIALD | Y.EPESLVGQ |
| hepy26695 | KVGLIKEAQR | IEKS.NKLLR | LKVLDGEGRL | RQIISGIALD | Y.EPESLVGQ |
| caje | KVAKVLDCQN | IEGS.EKLLK | FQLELDDKEI | RQVLSGIAKY | Y.KASDLIGK |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | KVVEILDVVK | VEGA.DKLLK | FKVFDGEFER | .QIISGLAKF | YPDFFKKLISE |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | KVVEQTPTVA | EA..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarunt | ..... | ..... | ..... | ..... | ..... |
| drmemt | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | ..... | ..... | ..... | ..... | ..... |
| lema | ..... | ..... | ..... | ..... | ..... |
| myge | ..... | ..... | ..... | ..... | ..... |
| mypn | ..... | ..... | ..... | ..... | ..... |
| urur | ..... | ..... | ..... | ..... | ..... |
| mypu | ..... | ..... | ..... | ..... | ..... |

1251

1300

| | | | | | |
|-------|------------|------------|------------|------------|------------|
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | ..... | ..... | ..... | ..... | ..... |
| bace2 | ..... | ..... | ..... | ..... | ..... |
| baan2 | ..... | ..... | ..... | ..... | ..... |
| clpe2 | ..... | ..... | ..... | ..... | ..... |
| deet | ..... | ..... | ..... | ..... | ..... |
| codi | ..... | ..... | ..... | ..... | ..... |
| thnw | ..... | ..... | ..... | ..... | ..... |
| thvo | ..... | ..... | ..... | ..... | ..... |
| pogi | QVCFIANLPP | RKLK.GIESE | GMILSAEDAD | GSLRVIMPAA | EVAAGSQVK. |
| bافر | QVCFIANLAP | RKLK.GIVSE | GMILSAENND | GSLAVVMPGR | EVKPGSEV.. |
| cyhu | QVSLLANLAP | REIK.GIVSQ | GMILMAEDAD | GSLKFVQPAA | VVNAGSMIG. |

| | | | | | |
|-------|------------|------------|------------|------------|-------------|
| chte | NVVLVANLAD | RTMR.GELSQ | GMILTVEGAD | GRLFLLEPQG | EGINGNSVS. |
| chmu | ..... | ..... | ..... | ..... | ..... |
| chtr | ..... | ..... | ..... | ..... | ..... |
| chpn | ..... | ..... | ..... | ..... | ..... |
| fugu | EVTLLLDLKK | QLVL.AEGKT | PEPAPQKGKK | K..... | ..... |
| hosa | EVAKLLDLKK | QLAV.AEGKP | PE.APKGKKK | K..... | ..... |
| anga | EVSLLLSLKQ | KLAS.LTGVP | VAAPAGGGKK | KG..NKK... | ..... |
| drme | ..... | ..... | ..... | ..... | ..... |
| sace | ..... | ..... | ..... | ..... | ..... |
| scpo | ..... | ..... | ..... | ..... | ..... |
| didi | ..... | ..... | ..... | ..... | ..... |
| arth | MVCVLCNLKP | AKMR.DIVSQ | AMVLAASSSD | GS..KVELVE | PPKTANIGER |
| orsa | KVCVLCNLKP | VAMR.GIKSH | AMVLAASNE | HT..KVELVE | PPESA AVGER |
| cael | LVVVLCNLKP | AKMR.GVESR | AMVMCASSPD | ...KVEIME | VPADSKPGTP |
| encu | ..... | ..... | ..... | ..... | ..... |
| trde | ..... | ..... | ..... | ..... | ..... |
| trpa | HVLIVDNLQP | RSLR.GVRSC | GMLLAAEYVD | AQGTKAIELV | QAPWALPGER |
| bobu | HIIIVDNLKP | AKFR.GIKSE | GMLIAAEDKN | KNFKVIIVED | SIQNPIAGER |
| cacr | ..... | ..... | ..... | ..... | ..... |
| suto | ..... | ..... | ..... | ..... | ..... |
| suso | ..... | ..... | ..... | ..... | ..... |
| aepe | ..... | ..... | ..... | ..... | ..... |
| pyba | ..... | ..... | ..... | ..... | ..... |
| pyho | YVIIVANLEP | KKLR.GVESQ | GMLLAADDGE | .NVALLMPDK | EVKLGAKVR. |
| pyab | YVVVVANLEP | KKLR.GIGSQ | GMLLAADDGE | .RVALLMPDK | EVKLGAKVR. |
| pyfu | YVVIVANLEP | KKLR.GVESQ | GMLLAADDGE | .KVALLMPDK | EVKLGAKVR. |
| meja | KVIVICNLKP | AKLC.GVLSE | GMILAAEDDE | GNVSLLTVDK | DIKAGSKVR. |
| meth | KITVLVNLKP | AKLF.GVKSE | GMVLATGES. | ..LNILDPG. | DAEVGERIR. |
| arfu | LVVVLANLKP | AKFM.GVESR | GMILAAEKDG | .KAVLLTPEK | EVEPGTRVC. |
| hanrc | RVVVVANMEP | SELF.GVESN | GMVLAAGED. | ..ADLLTTHE | DSEPGTKVM. |
| psfl | LTMMIANLKP | RKMK.FGISE | GMVMAAGPGG | EIYLLSPDS | GAKPGQRIK. |
| psae | LTLYVANLAP | RKMK.FGVSE | GMVLAAGPGG | EIYLLSPDS | GAKPGQRVK. |
| esco | HTIMVANLAP | RKMR.FGISE | GMVMAAGPGG | KDIFLLSPDA | GAKPGHQVK. |
| saty | ..... | ..... | ..... | ..... | ..... |
| yepe | MTVMVANLAP | RKMR.FGVSE | GMVMAAGPGX | SDIFLLSPDS | GAQPGMQVK. |
| vich | YTVVVANLKP | RKMK.FGMSE | GMILAAGPGG | SDLWLEPHQ | GAQAGMRVM. |
| haein | FVIMVANLAP | RKMK.FGVSE | GMILSAGTGG | SDLFLLSADS | GVTAGMQVK. |
| acac | FVIMVANLAP | RKMK.FGVSE | GMILSAGTGG | ADLFLLSADE | GVTAGMQVK. |
| pamu | FVVVIANLAP | RKMR.FGVSE | GMILSAGTGG | ADLFLLNADQ | GVKPGMQVK. |
| neme | MVIAVANFAP | RKMAKFGVSE | GMILSAATAD | GKLKLLDVDA | GAQPGDKVG. |
| nogo | MVIAVANFAP | RKMAKFGVSE | GMILSAATAD | GKLKLLDVDA | GAQPGDKV.. |
| xyfa | NVVFIANLAP | RKMR.FGISQ | GMILSAGFDS | GTLALLDADS | SAQPGMPVR. |
| buAPS | ..... | ..... | ..... | ..... | ..... |
| sime | ..... | ..... | ..... | ..... | ..... |
| agtu | ..... | ..... | ..... | ..... | ..... |
| brsu | ..... | ..... | ..... | ..... | ..... |
| melo | ..... | ..... | ..... | ..... | ..... |
| rhpa | ..... | ..... | ..... | ..... | ..... |
| mytu | ..... | ..... | ..... | ..... | ..... |
| rhru | ..... | ..... | ..... | ..... | ..... |
| noar | ..... | ..... | ..... | ..... | ..... |
| rico | ..... | ..... | ..... | ..... | ..... |

| | | | | | |
|-----------|------------|------------|------------|------------|------------|
| ripr | ..... | ..... | ..... | ..... | ..... |
| plyo | KEINSLQLSI | INKNC.FYEK | NIPLVFASS. | DNPFYHATQT | SGVLNFF... |
| plfa | KEVVSLLDSI | INNKC.FFEK | NIPLVFASHE | DKQVYHSTQD | NGSLTFF... |
| clpel | YVVLVANLKP | VKLRG.ELSQ | GMILAAAPSD | DSELLLVN.P | GEMLTGSQVR |
| clac | KVVLVANLKP | AKLMG.QLSQ | GMILAVATDD | DSKLYTLDIP | EDIPTGSIVR |
| liin | KVIVVSNLKP | VKLRG.LMSE | GMILSGEK.. | DGKLSVIEAN | SALPNGAKVK |
| limo | KVIVVSNLKP | VKLRG.LMSE | GMILSGEK.. | DGKLSVIEAS | SALPNGAKVK |
| baan1 | KVICVTNLKP | VKLRG.ELSQ | GMILAGEE.. | NGVLSLASID | QNIPNGTKIK |
| bacel | KVICVTNLKP | VKLRG.ELSQ | GMILAGEE.. | NGVLSLASID | QNLPNGTKI. |
| basu | KLVCVTNLKP | VKLRG.ELSQ | GMILAGEA.. | DGVLKVVSID | QSLPKGTRIK |
| bast | KVICVANLKP | AKLRG.EWSE | GMILAGGS.. | GGGFSLATVD | QHVPNGTKIK |
| baha | KVICVTNLKP | VKLRG.ELSQ | GMILAGSE.. | GDQLRLATVD | GALPNGSLVK |
| enfa | KVVIVANLKP | RKMRG.QISQ | GMILSAESP. | EGKLQIVEAP | KEMPNGAGIA |
| ocih | KVVIVANLKP | RKMRG.EISQ | GMILSAEYD. | .GKLQIVEAP | SEAPNGSSIS |
| stpy | KLQIVANLKP | RKMMKKYISQ | GMILSAEHG. | D.QLTVLTVD | SSVPNGSII. |
| stpn | KVQIVANLKP | RKMMKKYVSQ | GMILSAEHD. | G.KLTLLTVD | PAVPNGSVIG |
| stmu | KLQIVANLKP | RKMMG.LVSQ | GMILSAEHA. | DGKLTVLTVD | SSVPNGSQIG |
| lala | KLQIVANLKP | RKMMKKYVSQ | GMILSAEFD. | G.KLSVLTVD | DDVPAGSLIG |
| stau | KVAVVTNLKP | AKLMG.QKSE | GMILSAEK.. | DGVLTLVSLP | SAIPNGAVIK |
| oeoe | KIAIVANLKA | RKMAG.EISQ | GMILCAENS. | DGKVIVSELP | DEVEAGAAIN |
| thma | LIVVVANLKP | AKLMG.IESQ | GMLLAAKS.. | GDTLRLTVD | GEITPGAKVS |
| thth | KVVLVANLKP | AKLRG.IESQ | GMILAAQEG. | E.ALALVTVE | GEVPPGRW.. |
| dera | KVVLVANLKP | AKLRG.IESQ | GMILAAEDD. | AGNLDLVGTE | LDLPSGTKVR |
| stco |KP | AA..... | ..... | ..... | ..... |
| hepyj99 | MVCVVANLKP | AKLMG.EMSE | GMILAVRD.. | NDNLALISPT | REKIAGSLIS |
| hepy26695 | MVCVVANLKP | AKLMG.EMSE | GMILAVRD.. | SDNLALISPT | REKIAGSLIS |
| caje | QVCVISNLKK | AKIFG.HESD | GMILSAKS.. | GDKLVLIAPE | QLVQNGSLVG |
| aqae | ..... | ..... | ..... | ..... | ..... |
| funu | KVLAVVNLKF | TKLKG.EISQ | GMLLTTED.. | KNGVSLIKID | KTVEAGAIVS |
| trer | ..... | ..... | ..... | ..... | ..... |
| sy6803 | ..... | ..... | ..... | ..... | ..... |
| arth_1 | ..... | ..... | ..... | ..... | ..... |
| prma | ..... | ..... | ..... | ..... | ..... |
| caelmt | ..... | ..... | ..... | ..... | ..... |
| hosamt | ..... | ..... | ..... | ..... | ..... |
| tarumt | ..... | ..... | ..... | ..... | ..... |
| drmemt | ..... | ..... | ..... | ..... | ..... |
| anga2 | ..... | ..... | ..... | ..... | ..... |
| didimt | ..... | ..... | ..... | ..... | ..... |
| caabmt | ..... | ..... | ..... | ..... | ..... |
| sacemt | ..... | ..... | ..... | ..... | ..... |
| scpomt | | | | | |
| lema | | | | | |
| myge | | | | | |
| mypn | | | | | |
| urur | | | | | |
| mypu | | | | | |
| | 1301 | | | | 1350 |
| mask | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ | ~~~~~ |
| stpn2 | | | | | |
| bace2 | | | | | |

| | | | | | |
|-------|------------|------------|------------|------------|-------------|
| baan2 | | | | | |
| clpe2 | | | | | |
| deet | | | | | |
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