

A

```

1 M-----DLSALRV-----E-----EVONVH | BRCA1
1 M-----DLSAVOI-----O-----EVONVLM |
1 M-----TCSRMDL-----E-----GICSVIF |
571 R-----EIVVRDR-----S-----RSKMADA |
1 ML-----LR--VRSGNRPSLETAVREELPMMDEPGWE-----RTRDALF | BARD1
1 MP-----RRP--PRVCSGNOPAPVPAMEP-----ATDGLWAHSRAALM |
1 MPDNRQPRNRROPRIIRSGNEPRSAPEP-----DGRGAWAHSRAALH |

16 NA---*MQKILECPICLELILEKPVST-KCDHIFCKFCMLKLLN-QKKGPSH | BRCA1
16 HA---*MQKILECPICLELILEKPVST-KCDHIFCKFCMLKLLN-QKKGPSM |
16 SV---*MQKNLECPICLELILEKPVAT-KCDHIFCKFCMLQLLSKKGKGTVF |
586 TSHLERMGRELKCPICLSLYNSAVSLSCNHVFCNACVVK---SKMDAA |
36 RE---MERKLCCKMFLKDPVCLGGCEHVFCWTCV-----NENLGNF |
36 AR---LEKLLRCSRCA NILKEPVC LGGCEHIFCSGCI-----SDCVGSM | BARD1
42 DR---LEKLLRCSRCTNILREPVCLGGCEHIFCSNCV-----SDCVGT | H

* * * * *
60 QCPLCKNDITKRS LQESTRFSQLVEELLKIIICAFQLDGTGLEAYANSYH | BRCA1
60 QCPLCKNEITKRS LQESTRFSQLAEELLRI MA AFELDTGMLTNGF |
61 PCPLCKTEVTRRS LQESHFRKLLVEGOLKIIKAFEFDSGYKFFPSQF |
631 TCPVCKIPYHRRREIRGAPH---MDSLVSIIYKNMEDASGIIKLVSQA |
76 ECPLCNTPAWIRDVQVNR---LDNMIQLCAKLRN---LLSMGF |
76 GCPVCYTPAWILDKINRO---LDSMIQLSSKLRN---LLHDNM | BARD1
82 GCPVCYTPAWIIDLKINRO---LDSMIQLCSKLRN---LLHDNH |

```

B

```

1650 M SMVVSGLTPEFMLVYKFA RKHHITLNLITEETHVVMKTDAEFVCRH | BRCA1
1593 I SMVVSGLTPKEVMTVQKFAEKYRLTLTDAITEETHVVIKTDAEFVCRM |
1374 L SFVVASGLNOCEMALVORFSKTTQSI LSSRITDSTTHVIMKTDAELVCRF |
1340 L VLSQSGLTVEKTVIAEFAELSGVTISKNDSTVTHVIVASINENGACKRFA |
566 V VLIASGLLATQRADLTKLAKMLKASICA EYDSTVTHVIVS---DEPFLR | BARD1
558 L VFI GSGLSSQOOKMLSKLETVLKAKKCM EFDSTVTHVIVP---DEEAO |
570 L VLI GSGLSSQOOKMLSLAVI LKAKKYTEFDSTVTHVIVP---GDVAV | H

1700 T LKYFLGIAGGK WVS YFVVTQSIKERKMLNEHDFEVRGDV VNGRNHOGPH | BRCA1
1643 T LKYFLGIAGGK WIVSYSWVVSIOERRLLNVHEFEVETG DVV TGRNHOGPM |
1424 T LKYFOGIASRK WVS YEWVVSIFREGOILDEYDFEVKGDV INGRNHGPF |
1390 T LKFMMALEGGK WILTI DWIKACMKNTKYVSEEPYEITMDV-----FA |
613 T MCKMMGILAGCWTLOFSWVKACLOS CNREPEESYEIPHGP-----FA |
605 T LKCM LGLS GCVLKF DWVKA CLDSKVREOE EKYVPGGP-----FM | BARD1
617 T LKCM LGLN GCWILKFEWVKA CLR R KVC EOE EKYEIP EGP-----FH |

1750 K RAR---ESODRKI---FRGLEICCY---GPFTNMP TDQLEWVMVQLCGAH | BRCA1
1693 R RSR---ESRE-KL---FKGLQVYC---DPFTNMPKDDLERM LQLCGAM |
1474 R RSR---LGS DGL---LIDFEICFF---GSFTDMTLDLEWVMVSECGAF |
1431 H GIRE GPY LGRORALK KKP KLF TGLK FYIMGDFELAYKGYL OD LIVAAGGFA |
654 H RAR---LNQO OML---POLLDGCHFYFLGCFT EIRKEDLIELVAAAGGF |
646 Q RSR---LNREOLL---PKLFDGCYFFLGGNFKHHPRDDLLKLI AAAGGM | BARD1
658 R RSR---LNREOLL---PKLFDGCYFYLWGT FKHHPKDN LKLV TAGGGH |

1790 S VVKELSSFTLG-TGVHPIVVOPDAWTE DN-----GFHAIGQ---MCEAH | BRCA1
1732 S VVKELPSLTHD-TGAHLVVI VOPDAWTE DS-----NCPDIGO---LCKAM |
1514 T VVKKLOFFK K K-HNVTSLVI VOPDASTEVR-----DYTEIRK---KHKAFA |
1481 T I L R R R P V S S D D - N E A S T I V V F S V E P S K K K T L T O R R S D A E A L A K - - S A R A F A
697 Q I L I R O P K P D S D V T O T I N T V A Y H A E A D S D O R F C T O Y I V F D R A S K Y R P E R V F
689 K V L S R K P K P D S D V T O T I N T V A Y H A K P E S D O R F C T O Y I V Y E D L F N C H P E R V M | BARD1
701 Q I L S R K P K P D S D V T O T I N T V A Y H A R P D S D O R F C T O Y I I Y E D L C N Y H P E R V H

1831 P V---VTRWVLD SVALYQCQELDTYLIPOIP-----HSHYH | BRCA1
1773 R L---VMWDVLD SLSYRCRDLDAYLVQNI TCD S S E P O D S N D M |
1555 L V---VTRWVLD SVA T Y R L O K F D A Y L - - - - - I T C D S S E P O D S N D F |
1528 R A---A S S W V L D S I A G C O I L V - - - - - L - - - - - I A
747 R O G K V W F A P S S W I I E C I T S F O L L P - - - - - V - - - - - H F
739 R O G K V W M A P S T W L I S C I M A F E L L P - - - - - L - - - - - D S M | BARD1
751 R O G K V W K A P S S W F I D C V M S F E L L P - - - - - L - - - - - D S H |

```