

Supplementary data 2-Table 1 : predicted gene content of the analyzed formae speciales belonging to Fusarium oxysporum species complex.

Stains	Pan-genome		Core-genome		Accessory genome		Unique-genome	
	Genes with Unknown function	Genes with Known function	Genes with Unknown function	Genes with Known function	Genes with Unknown function	Genes with Known function	Genes with Unknown function	Genes with Known function
F.o.f.sp.apiiNRRL38295	5977	13308	939	4269	4754	8585	284	454
F.o.f.sp.corianarii3-2	6057	13366	940	4262	5036	9030	81	74
F.o.f.sp.corianariiGL306	5974	13413	941	4273	4943	9014	90	126
F.o.f.sp.vasinfestumLA1E	4818	11655	957	4272	3405	6457	706	676
F.o.f.sp.spinaciaeFus254	5107	12348	956	4272	3672	7183	479	893
F.o.f.sp.momordicae90NF2-1	4721	11132	945	4258	3670	6783	104	91
F.o.f.sp.momordicaeNRRL26413	4807	11181	945	4260	3765	6839	97	82
F.o.f.sp.lagenariae01-03008	5105	11509	939	4266	3764	6851	397	392
F.o.f.sp.fragariae160609	5122	11526	943	4259	3840	6972	339	295
F.o.f.sp.niveumR1	6126	13884	945	4257	4151	6885	1017	2742
F.o.f.sp.spinaciaeMF15	5379	11706	935	4249	3818	6852	623	605
F.o.f.sp.nicotianaeFt-1512	4665	11226	950	4249	3386	6644	327	333
F.o.f.sp.vasinfestumNRRL31665	5112	11760	979	4370	3574	6714	559	676
F.o.f.sp.liliiFol39	5054	11530	936	4254	3540	6720	576	556
F.o.f.sp.fragariaeBRIP5168a	4255	10721	945	4246	3058	6233	252	242
F.o.f.sp.LagenariaeLag3-1	4387	10819	927	4235	2953	6101	503	483
F.o.f.sp.koae44	3786	10045	939	4233	2360	5322	487	490
F.o.f.sp.conglutinans58385	5845	11789	951	4278	4601	7356	292	155
F.o.f.sp.conglutinansFGL03-6	5629	13077	944	4266	4329	8002	355	809
F.o.f.sp.conglutinansrace254008	5327	11488	951	4276	4240	7126	135	86
F.o.f.sp.melonisFom005	5201	11713	942	4261	3663	6799	595	653
F.o.f.sp.niveumFon002	5017	11251	953	4268	3444	6450	616	533

F.o.f.sp.cucumerinumFoc018	5671	11964	948	4285	4341	7362	369	317
F.o.f.sp.cucumerinumFoc030	5575	11918	950	4288	4317	7362	304	268
F.o.f.sp.Raphani54005	5344	11401	957	4279	3771	6456	614	666
F.o.f.sp.MelongenaeJ-71	4948	11390	954	4256	3346	6395	645	739
F.o.f.sp.pisiHDV247	5206	12075	951	4263	3763	7168	490	644
F.o.f.sp.liniF282	4533	11063	994	4537	3271	6142	254	384
F.o.f.sp.liniF324	4567	10812	980	4360	3256	6020	305	432
F.o.f.sp.cubense160527	4584	11277	934	4208	2663	5950	986	1119
F.o.f.sp.ciceris38-1	5113	11256	960	4248	2510	5251	1642	1757
F.o.f.sp.gladioliG76	5457	11703	949	4231	3143	5971	1362	1501
F.o.f.sp.lycopersiciFol014	4839	11103	923	4222	3719	6722	195	159
F.o.f.sp.lycopersiciFol074	5065	11298	925	4219	3862	6889	276	190
F.o.f.sp.Melonis26406	4047	12712	925	4222	3808	7238	821	1252
F.o.f.sp.albedinis133	5522	11938	931	4247	4380	7504	209	187
F.o.f.sp.albedinis9	5835	13679	926	4232	4489	8384	420	1063
F.o.f.sp.matthiolaePHW726	5299	12175	917	4233	3928	7219	454	723
F.o.f.sp.tulipaeTu67	5096	11618	916	4228	3679	6804	499	586
F.o.f.sp.apii207	5919	13443	901	4247	3863	7523	1139	1689
F.o.f.sp.radicis-cucumerinumForc024	4468	11037	914	4223	3493	6713	59	101
F.o.f.sp.radicis-cucumerinumForc031	4484	11021	912	4225	3492	6707	78	89
F.o.f.sp.gladioliG2	4991	11571	911	4226	3642	6848	435	497
F.o.f.sp.cepaeFoC125	4872	11458	919	4240	3850	7091	103	127
F.o.f.sp.cepaeFoCFus2	4579	11994	911	4233	3552	7354	116	407
F.o.f.sp.medicaginisFom-5190a	4699	11184	930	4237	3290	6458	478	489
F.o.f.sp.Radice-lycopersici26381	4538	11040	914	4208	3102	6211	522	621
F.o.f.sp.nicotianaeFt-Rob	4507	11132	914	4226	3247	6450	346	456
F.o.f.sp.narcissiN139	5992	12354	916	4230	4562	7654	511	470
F.o.f.sp.narcissiNa5	5481	11896	913	4233	4158	7300	400	363
F.o.f.sp.cubenseC1HIR9889	4524	10630	997	4330	2063	4711	1462	1589

Supplementary data 2-Table 2 : predicted core-gene families of <i>Fusarium oxysporum</i>. f. sp <i>albedinis</i> strains.		
Gene families	<i>Fusarium oxysporum</i>. f. sp. <i>albedinis</i> 133	<i>Fusarium oxysporum</i>. f. sp. <i>albedinis</i> 9
	Gene count	Gene count
Transketolase,thiaminediphosphatebindingdomain	3	3
PeptidasefamilyM28	15	15
Vacuolarmembrane-associatedproteinIml1	1	1
Ubiquitincarboxyl-terminalhydrolase	21	21
NAT,N-acetyltransferase,ofN-acetylglutamatesynthase	1	1
Fasciclindomain	5	3
ABCtransporter	44	44
Ferricreductaseliketranstranmembranecomponent	7	7
Nse4C-terminal	1	1
Acyl-CoAdehydrogenase,C-terminaldomain	11	11
Calcium-dependentchannel,7TMregion,putativephosphate	5	5
DEAD/DEAHboxhelicase	36	37
D-isomerspecific2-hydroxyaciddehydrogenase,NADbindingdomain	17	19
MajorFacilitatorSuperfamily	207	200
AMP-bindingenzyme	39	39
non-haemdioxygenaseinmorphinesynthesisN-terminal	3	3
Fattyacidssaturase	7	7
AlcoholdehydrogenaseGroES-likedomain	29	29
Mre11DNA-bindingpresumeddomain	1	1
Copperamineoxidase,enzymedomain	7	7
DNApolymerasealpha/epsilonsubunitB	3	3
RNALigase	5	5
DnaJCterminaldomain	9	9
AdaptinNterminalregion	11	11
Ubiquitin-bindingdomain	1	1

NMDA receptor-regulated protein 1	1	1
Ankyrin repeats (3 copies)	11	11
BCS1 N-terminal	5	5
Vacuolar sorting protein 9 (VPS9) domain	3	3
Protein of unknown function (DUF933)	1	1
Transferrin receptor-like dimerisation domain	5	5
Domain of unknown function (DUF3402)	1	1
Fungal specific transcription factor domain	127	127
Glycosyl hydrolase family 43	17	16
Regulator of G protein signaling domain	3	3
ATP-NAD kinase C-terminal domain	3	3
Domain of unknown function (DUF1929)	3	3
Transcription factor TFIID (or TATA-binding protein, TBP)	1	1
Mediator complex subunit 13 C-terminal domain	1	1
NUC153 domain	3	3
Elongation factor Tu GTP binding domain	15	15
26S proteasome subunit RPN7	3	1
EF hand associated	1	1
Formamidopyrimidine-DNA glycosylase H2TH domain	1	1
FAD binding domain	67	65
E1-E2 ATPase	11	11
C2HE/C2H2/C2HC zinc-binding finger	1	1
Helicase associated domain (HA2)	7	7
Thiolase, N-terminal domain	9	11
Importin beta binding domain	1	1
ssDNA-binding domain of telomere protection protein	1	1
Surfeit locus protein 6	1	1
Hint-domain	1	1
Acetyl-CoA hydrolase/transferase N-terminal domain	1	1
Mitochondrial carrier protein	60	60

Dynaminfamily	7	7
MethyltransferaseinvolvedinWilliams-Beurensyndrome	1	1
Thioredoxin-like	5	5
Cupin	27	27
PQlooprepeat	7	7
SNF2-relateddomain	19	19
Enolase,C-terminalTIMbarreldomain	1	1
CoenzymeAtransferase	1	1
Zincfinger,C2H2type	21	21
TATAelementmodulatoryfactor1TATAbinding	1	1
LIMdomain	1	1
PCIdomain	13	13
Dynamincentralregion	3	3
Glutaredoxin	5	5
Proteinkinasedomain	102	103
HAT(Half-A-TPR)repeat	1	1
snoRNAbindingdomain,fibrillarln	3	3
C2domain	11	11
NrapproteinPAP/OAS1-likedomain5	1	1
Histidinekinase-,DNAgyraseB-,andHSP90-likeATPase	15	15
PIGA(GPIanchorbiosynthesis)	1	1
Sodium/calciumexchangerprotein	5	5
ZincfingerC-x8-C-x5-C-x3-Htype(andsimilar)	5	5
Syntaxin	7	7
Domainofunknownfunction(DUF3395)	1	1
Spa2homologydomain(SHD)ofGIT	1	1
OxidoreductaseNAD-bindingdomain	5	5
ZIPZinctransporter	15	15
RNApolymeraseRpb1,domain1	3	3
WDdomain,G-betarepeat	75	73

Thg1Cterminaldomain	1	1
Prenyltransferaseandsqualeneoxidaserepeat	1	1
Cid1familypolyApolymerase	3	3
ERmembraneproteincomplexsubunit1,C-terminal	1	1
BiotinandThiaminSynthesisassociateddomain	1	1
Bromodomain	7	7
Tubulin/FtsZfamily,GTPasedomain	3	3
PhoDrelatedphosphatase	1	1
Centrosomemicrotubule-bindingdomainofCep57	1	1
ATPasefamilyassociatedwithvariouscellularactivities(AAA)	33	33
FFdomain	1	1
Domainofunknownfunction(DUF4110)	1	1
Sulfatepermeasefamily	5	5
UTP15Cterminal	1	1
Maintenanceofmitochondrialstructureandfunction	5	5
Non-repetitive/WGA-negativenucleoporinC-terminal	1	1
AFG1-likeATPase	1	1
Oxidoreductasefamily,NAD-bindingRossmannfold	13	11
FirstLongindomainofFUZ,MON1andHPS1	1	1
Tryptophansynthasealphachain	1	1
Adenylatekinase	5	5
Zinc-fingerdomainofmonoamine-oxidaseArepressorR1	1	1
Proteinprenyltransferasealphasubunitrepeat	5	5
Pex2/Pex12aminoterminalregion	3	3
Xrn1helicaldomain	1	1
Actincytoskeleton-regulatorycomplexproteinEND3	1	1
ReplicationproteinACterminal	1	1
mRNACleavageandpolyadenylationfactorCLP1P-loop	1	1
Lonprotease(S16)C-terminalproteolyticdomain	3	3
Carbamoyl-phosphatesynthaseLchain,ATPbindingdomain	7	7

GHMPkinasesNterminaldomain	5	5
PPRrepeatfamily	3	3
GTP1/OBG	1	1
RNAPolymeraseRpb5,C-terminaldomain	1	1
WSCdomain	9	9
Kelchmotif	9	9
tRNAsynthetaseclassIIcoredomain(G,H,P,SandT)	7	7
Pre-mRNA-splicingfactorSF3acomplexsubunit2(Prp11)	1	1
GNL3L/Grn1putativeGTPase	1	1
RNBdomain	5	5
Transientreceptorpotential(TRP)ionchannel	9	9
Dip2/Utp12Family	5	5
Cationeffluxfamily	11	11
Phosphatidylinositol3-and4-kinase	5	5
RibosomalproteinL6	5	5
V-ATPasesubunitH	1	1
XPGI-region	1	1
Phosphoglucomutase/phosphomannomutase,alpha/beta/alphadomainIII	1	0
AutophagyproteinATG17-likedomain	3	3
Man1-Src1p-C-terminaldomain	1	1
Hingedomainofcleavagestimulationfactorsubunit2	1	1
Endoplasmicreticulumvesicletransporter	3	3
Sel1repeat	5	5
Proteasomesubunit	19	19
RNAPolymeraseRpb3/Rpb11dimerisationdomain	3	3
Zinc-fingerofC2H2type	1	1
ThiFfamily	7	7
Hydroxymethylglutaryl-coenzymeA reductase	1	1
Cullinfamily	7	7
SaccharopinedehydrogenaseC-terminaldomain	1	1

8-oxoguanineDNAglycosylase,N-terminaldomain	1	1
Actin	13	13
RibosomalS13/S15N-terminaldomain	1	1
Synaptobrevin	5	5
Asparaginase	7	7
Adenosinedeaminase	5	5
C3HCzincfinger-like	1	1
C2H2typezinc-finger(2copies)	1	1
Ariadnedomain	1	1
XPGN-terminaldomain	5	5
tRNAsynthetasesclassI(EandQ),catalyticdomain	5	5
Ribonucleotidereductase,barreldomain	1	1
ABC-2typetransporter	9	9
Wyosinebaseformation	1	1
Exocystcomponent84C-terminal	1	1
pre-mRNAsplicingfactorcomponent	1	1
CIDdomain	5	5
DNAgyrase/topoisomeraseIV,subunitA	1	1
40SribosomebiogenesisproteinTsr1andBMS1C-terminal	3	3
Proteinofunknownfunction(DUF2034)	1	1
CellmorphogenesisN-terminal	1	1
Exportin1-likeprotein	1	1
chorismatebindingenzyme	3	3
PPIC-typePPIASEdomain	1	1
Vta1like	1	1
DHHCpalmitoyltransferase	7	7
DNApolymerasealphasubunitBN-terminal	1	1
UDP-glucose/GDP-mannosedehydrogenasefamily,centraldomain	3	3
XFPN-terminaldomain	3	3
Catalase	3	3

Thiaminepyrophosphateenzyme,N-terminalTPPbindingdomain	5	5
MgsAAAA+ATPaseCterminal	1	1
Cofilin/tropomyosin-typeactin-bindingprotein	7	7
tRNAsynthetasesclassI(R)	1	1
Pirin	1	1
Subtilasefamily	5	5
SecY	1	1
IPPtransferase	1	1
Dak1domain	1	1
TAF6C-terminalHEATrepeatdomain	1	1
FADdependentoxidoreductase	23	23
Armadillo/beta-catenin-likerepeat	1	1
NAD(P)transhydrogenasebetasubunit	1	1
Adaptorcomplexesmediumsubunitfamily	5	5
Temperaturedependentprotein affectingM2dsRNAreplication	1	1
UncharacterizedproteinfamilyUPF0029	3	3
ATPsynthasealpha/betafamily,nucleotide-bindingdomain	1	1
GMCOxidoreductase	13	13
Vps5Cterminallike	3	3
EF-handdomainpair	5	5
Aconitasefamily(aconitatehydratase)	3	3
PWIdomain	3	3
HomeoboxKNdomain	5	5
Proteinofunknownfunction(DUF917)	1	1
Nse1non-SMCcomponentofSMC5-6complex	1	1
Transcription-silencingproteinClr2	1	1
26SproteasomeregulatorysubunitRPN2C-terminaldomain	1	1
Oxidoreductasemolybdopterinbindingdomain	1	1
CationtransportingATPase,C-terminus	5	5
EarlytranscriptionelongationfactorofRNAPolIII,NGNsection	1	1

Sec7domain	3	3
Pre-mRNAsplicingfactor	3	3
Beige/BEACHdomain	1	1
Malicenzyme,NADbindingdomain	3	3
Metallo-beta-lactamasesuperfamilydomain	1	1
NB-ARCdomain	1	1
RequiredfornucleartransportofRNAPolIIC-terminus1	1	1
Domainofunknownfunction(DUF4187)	1	1
PRMT5TIMbarreldomain	1	1
Multicopperoxidase	7	7
Flavin-bindingmonooxygenase-like	22	22
Aminoacidkinasefamily	1	1
ExocystcomplexcomponentSec10	3	3
Eukaryoticglutathionesynthase,ATPbindingdomain	1	1
RhoGAPdomain	11	11
COMPASS(ComplexproteinsassociatedwithSet1p)componentN	1	1
P5-typeATPasecationtransporter	1	1
RibosomalproteinL4/L1family	1	1
SEPdomain	1	1
SF3a60/Prp9C-terminal	1	1
CTPsynthaseN-terminus	1	1
ERCC3/RAD25/XPBC-terminalhelicase	1	1
F-box-like	21	21
Histidinebiosynthesisprotein	3	3
Oxysterol-bindingprotein	7	7
CTLH/CRAC-terminaltoLisHmotifdomain	7	7
CNHdomain	1	1
ATPsynthasesubunitC	7	7
G-patchdomain	5	5
Proteinofunknownfunction(DUF3433)	9	9

Phospholipid-translocatingP-typeATPaseC-terminal	7	7
Thioredoxin	15	15
Phytochromeregion	1	1
Glycosylhydrolasesfamily32Cterminal	1	1
Hexokinase	5	5
RegulatorofTy1transpositionprotein107BRCTdomain	1	1
Pyridinenucleotide-disulphideoxidoreductase	21	19
tRNAsynthetasesclassI(M)	1	1
TFA2Wingedhelixdomain2	1	1
Cytochromeb5-likeHeme/Steroidbindingdomain	7	7
Domainofunknownfunction(DUF1899)	1	1
F-actincappingproteinalphasubunit	1	1
Celldivisionproteinanillin	1	1
Inositol-pentakisphosphate2-kinase	1	1
ABC1atypicalkinase-likedomain	5	5
Apoptosis-antagonizingtranscriptionfactor,C-terminal	1	1
Chalconeandstilbenesynthases,C-terminaldomain	1	1
Rad4transglutaminase-likedomain	5	5
linkerbetweenRRM2andRRM3domainsinRBM39protein	1	1
Clusteredmitochondria	1	1
Forkheaddomain	5	5
Tubulindomain	1	1
FGGYfamilyofcarbohydratekinases,C-terminaldomain	7	7
BING4CT(NUC141)domain	1	1
RasGEFdomain	7	7
Cyclophilintypepeptidyl-prolylcis-transisomerase/CLD	9	9
Dcp2,boxAdomain	1	1
PHdomain	5	5
Cdc37Nterminalkinasebinding	1	1
Polysaccharidelyasefamily4,domainIII	1	1

Domainofunknownfunction(DUF3535)	1	1
RecF/RecN/SMCNterminaldomain	7	7
X-Prodiptidyl-peptidase(S15family)	1	1
Pleckstrinhomologydomain	1	1
H2C2zincfinger	1	1
CBSdomain	1	1
ATPdependentDNAligasedomain	5	5
Tetratricopeptiderepeat	11	11
Glycosidehydrolasefamily5C-terminaldomain	3	3
MutSdomainV	3	3
non-SMCmitoticcondensationcomplexsubunit1,N-term	1	1
NLIinteractingfactor-likephosphatase	7	7
FADlinkedoxidases,C-terminaldomain	3	3
Velvetfactor	1	1
Cytochromedomainofcellobiosedehydrogenase	3	3
Glycosylhydrolasefamily3C-terminaldomain	11	11
Anaphasepromotingcomplexsubunit8/Cdc23	1	1
Utp13specificWD40associateddomain	1	1
AIRcarboxylase	1	1
Asparaginase,N-terminal	3	3
Histone-bindingproteinRBBP4orsubunitCofCAF1complex	3	3
Signalpeptidasesubunit	1	1
Originrecognitioncomplex(ORC)subunit5C-terminus	1	1
AhpC/TSAfamily	5	5
Vacuolarsortingprotein39domain1	1	1
6-phosphofructo-2-kinase	5	5
Mad3/BUB1homologyregion1	1	1
ATPphosphoribosyltransferase	1	1
Iontransportprotein	3	3
D-aminopeptidase,domainB	1	1

3-hydroxyacyl-CoA dehydrogenase, NAD binding domain	3	3
Sulfatase	13	13
Peptidase family M41	3	3
Pyrroline-5-carboxylate reductase dimerisation	3	3
NLE (NUC135) domain	1	1
CAP-Gly domain	3	3
Lyase	5	5
Ribosomal protein L10	3	3
twin BRCT domain	1	1
Cullin binding	1	1
Sorting nexin 8/Mvp1 BAR domain	1	1
Family of unknown function (DUF5923)	3	3
Glycosyl hydrolases family 38 N-terminal domain	1	1
eRF1 domain 1	1	1
TIP49P-loop domain	3	3
PHD-zinc-finger like domain	3	3
RAM signalling pathway protein	1	1
RNA polymerase III subunit RPC82	1	1
Mitochondrial branched-chain alpha-ketoacid dehydrogenase kinase	5	5
Ribosomal protein S5, C-terminal domain	1	1
Initiation factor eIF2gamma, C-terminal	1	1
CSL zinc finger	1	1
Phosphatidylserine decarboxylase	3	3
AAA domain (Cdc48 subfamily)	5	5
Mis6	1	1
Alpha amylase, C-terminal all-beta domain	1	1
TFIIHp62 subunit, N-terminal domain	1	1
Transketolase, pyrimidine binding domain	1	1
tRNA synthetases class I (I, L, M and V)	5	5
Cupin-like domain	5	5

Domainofunknownfunction(DUF3384)	1	1
DEAD_2	1	1
DDHDdomain	1	1
pre-mRNAprocessingfactor3(PRP3)	1	1
RNAPolymeraseRpb1,domain5	1	1
Domainofunknownfunction(DUF1932)	1	1
Glyceraldehyde3-phosphatedehydrogenase,C-terminaldomain	1	1
SART-1family	1	1
Aspartate/ornithinecarbamoyltransferase,carbamoyl-Pbindingdomain	1	1
Smallsubunitofacetolactatesynthase	1	1
CAS/CSEprotein,C-terminus	1	1
Cse1	1	1
ELMO/CED-12family	1	1
Aminoacidpermease	23	23
AAAdomain	11	11
EukaryoticDNAtopoisomeraseI,catalyticcore	1	1
KHdomain	7	7
UPF0113Pre-PUAdomain	1	1
Anticodonbindingdomain	3	3
RNArecognitionmotif.(a.k.a.RRM,RBD,orRNPdomain)	41	41
PULdomain	1	1
LD-carboxypeptidaseC-terminaldomain	1	1
Dioxygenase	9	9
Glutamate/Leucine/Phenylalanine/Valinedehydrogenase	3	3
DNAPolymerasefamilyB	5	5
Zinc-bindingdehydrogenase	23	23
Oxidoreductasefamily,C-terminalalpha/betadomain	1	1
Glycosylhydrolasesfamily2,TIMbarreldomain	1	1
Fructose-1-6-bisphosphatase,C-terminaldomain	1	1
Righthandedbetahelixregion	1	1

BacteroidetesVLRf1releasefactor	1	1
MmgE/PrpDN-terminaldomain	1	1
FADbindingdomainofDNAphotolyase	3	3
FAD-bindingdomain	3	3
CytochromeP450	39	37
OxidoreductaseFAD-bindingdomain	1	1
SWIB/MDM2domain	3	3
PrpFprotein	1	1
Ringfingerdomain	7	7
Semialdehydedehydrogenase,dimerisationdomain	1	1
Domainofunknownfunction(DUF1996)	7	7
alpha/betahydrolasefold	47	45
Iron/manganesesuperoxidedismutases,C-terminaldomain	3	3
Calcineurin-likephosphoesterase	17	15
RING/Uboxlikezinc-bindingdomain	1	1
Ionchannel	1	1
ABCtransportertransmembraneregion	17	17
MannitoldehydrogenaseC-terminaldomain	1	1
HydrolyticATPbindingsiteofdyneinmotorregion	1	1
Proteinofunknownfunction(DUF3955)	1	1
Ribosome-associatedcomplexheaddomain	1	1
Shikimatedehydrogenasesubstratebindingdomain	3	3
Synaptotagmin-like mitochondrial-lipid-bindingdomain	1	1
DNA-dependentRNAPolymerase	1	1
CobW/HypB/UreG,nucleotide-bindingdomain	7	7
SacIhomologydomain	7	7
Chitin synthase	16	16
Phosphatidylserinedecarboxylase	3	3
Cellulase(glycosylhydrolasefamily5)	9	9
Nup133Nterminallike	1	1

SterolmethyltransferaseC-terminal	1	1
Galactose-1-phosphateuridylyltransferase,N-terminaldomain	1	1
5'-AMP-activatedproteinkinasebetasubunit,interactiondomain	1	1
EXSfamily	1	1
Pumilio-familyRNAbindingrepeat	5	5
Histidine-specificmethyltransferase,SAM-dependent	3	3
GammatubulincomplexcomponentN-terminal	5	5
Sodium:neurotransmittersymporterfamily	3	3
Cyclin	13	13
Commoncentraldomainoftyrosinase	5	5
RNAPolymeraseRpb2,domain6	3	3
RhoGEFdomain	3	3
NADH-ubiquinoneoxidoreductasecomplexI,21kDasubunit	1	1
DipeptidylpeptidaseIV(DPPIV)N-terminalregion	1	1
ProteinsimilartoCwfJC-terminus1	3	3
RegioninClathrinandVPS	3	3
C-terminalregionofeIF3h	1	1
2Fe-2Siron-sulfurclusterbindingdomain	3	3
ALG6,ALG8glycosyltransferasefamily	1	1
RNAPolymeraseIIIsubunitRpc25	1	1
Dos2-interactingtranscriptionregulatorofRNA-Pol-II	1	1
N-terminaldomainofoxidoreductase	1	1
Glycosylhydrolasesfamily18	11	9
ATP-dependentproteaseLa(LON)substrate-bindingdomain	1	1
CDK-activatingkinaseassemblyfactorMAT1	1	1
impB/mucB/samBfamily	1	1
NUDIXdomain	7	7
CAF1familyribonuclease	1	1
tRNAsynthetasesclassII(A)	1	1
TranscriptionfactorS-II(TFIIS),centraldomain	1	1

SRI(Set2Rpb1interacting)domain	1	1
Sas10C-terminaldomain	1	1
FungalZn(2)-Cys(6)binuclearclusterdomain	45	45
Domainofunknownfunction(DUF3543)	1	1
Pyridoxal-phosphatedependentenzyme	13	13
Ribosomal_S17N-terminal	1	1
Spc7kinetochoreprotein	1	1
Prefoldin subunit	5	5
Mitochondrialinnermembraneprotein	1	1
Outermitochondrialmembranetransportcomplexprotein	1	1
Kinesinmotordomain	15	15
Acetohydroxyacidisomeroeductase,NADPH-bindingdomain	1	1
GNATacetyltransferase2	1	1
Amidohydrolasefamily	19	19
Proteinofunknownfunction(DUF3419)	1	1
tRNAsynthetasesclassI(WandY)	3	3
Nitrogenpermeaseregulator2	1	1
Ubiquitinfamily	3	3
Replicationfactor-ACterminaldomain	1	1
STI1domain	1	1
GlutathioneS-transferase,N-terminaldomain	17	17
Polysaccharidelyasefamily4,domainII	3	3
JAB1/Mov34/MPN/PAD-1ubiquitinprotease	3	3
UnstructuredregiononcNMP-bindingprotein	1	1
Ladomain	3	3
Ribosome60SbiogenesisN-terminal	1	1
BARdomain	7	7
NADbindingdomainof6-phosphogluconatedehydrogenase	1	1
PhosphatidylinositolglycanclassN(PIG-N)	1	1
MutLCterminaldimerisationdomain	1	1

Coiled-coildomaincontainingprotein(DUF2052)	1	1
Electrontransferflavoproteindomain	3	3
SWIRMdomain	3	3
MCMP-loopdomain	5	5
2'-5'RNAligasesuperfamily	1	1
Myb-likeDNA-bindingdomain	7	7
Anaphase-promotingcomplexsubunit4WD40domain	3	3
HEAT-likerepeat	5	5
Metallo-peptidasefamilyM12	1	1
ReplicationfactorRFC1Cterminaldomain	1	1
26SproteasomeregulatorysubunitRPN6N-terminaldomain	1	1
Lariatdebranchingenzyme,C-terminaldomain	1	1
Anaphase-promotingcomplex,cyclosome,subunit3	5	5
KinetochoresCENP-Cfungalhomologue,Mif2,N-terminal	1	1
FATdomain	3	3
RaffinosesynthaseorseedimbibitionproteinSip1	1	1
Insulinase(PeptidasefamilyM16)	1	1
Histidinoldehydrogenase	1	1
LNS2(Lipin/Ned1/Smp2)	1	1
tRNAsynthetasesclassII(D,KandN)	7	7
HelicaseconservedC-terminaldomain	1	1
Zinc-binding	25	25
Bap31/Bap29transmembraneregion	1	1
EZH2N-terminaldomain	1	1
Fumarylacetoacetate(FAA)hydrolasefamily	5	5
S4domain	5	5
Ubiquitin-likemodifier-activatingenzymeATG7N-terminus	1	1
Galactoseoxidase,centraldomain	3	3
PutativeIgdomain	1	1
PRP1splicingfactor,N-terminal	1	1

GatB/GatEcatalyticdomain	1	1
SNAREdomain	3	3
Tetrahydrofolatedehydrogenase/cyclohydrolase,NAD(P)-bindingdomain	1	1
HECT-domain(ubiquitin-transferase)	5	5
HydantoinaseB/oxoprolinase	1	1
eIF3subunit6Nterminaldomain	1	1
PeptidasefamilyM1domain	5	5
PXAdomain	5	5
Multiproteinbridgingfactor1	1	1
PHD/FYVE-zinc-fingerlikedomain	1	1
Formyltransferase	5	5
Cytokine-inducedanti-apoptosisinhibitor1,Fe-Sbiogenesis	1	1
Aft1HRRdomain	1	1
RibosomalproteinL23,N-terminaldomain	1	1
Neutral/alkalinenon-lysosomalceramidase,N-terminal	1	1
TupN-terminal	1	1
lactate/malatedehydrogenase,alpha/betaC-terminaldomain	3	3
Phosphoribosylglycinamidesynthetase,ATP-grasp(A)domain	1	1
PINITdomain	1	1
GPIethanolaminephosphatetransferasemembraneregion	1	1
POB3-likeN-terminalPHdomain	1	1
ATP-utilisingchromatinassemblyandremodellingN-terminal	1	1
MetallopeptidasefamilyM24	11	11
Dolichyl-phosphate-mannose-proteinmannosyltransferase	5	5
Prp18domain	1	1
PROCN(NUC071)domain	1	1
KetopantoatereductasePanE/ApbACterminal	5	5
RibosomalL30N-terminaldomain	1	1
Glutaminesynthetase,catalyticdomain	1	1

Brf1-likeTBP-bindingdomain	1	1
EamA-liketransporterfamily	1	1
Animalhaemperoxidase	3	3
TubulinbindingcofactorC	1	1
BPG-independentPGAMN-terminus(iPGM_N)	1	1
SEN1Nterminal	1	1
Pre-mRNAsplicingfactorPRP21likeprotein	1	1
FibronectintypeIIIdomain	3	3
3'-5'exonuclease	1	1
D-arabinono-1,4-lactoneoxidase	1	1
bZIPtranscriptionfactor	9	9
Septin	7	7
RibosomalfamilyS4e	1	1
Myosinhead(motordomain)	3	3
Tudordomain	3	3
LeucineRichrepeat	7	7
ProteasomeregulatorysubunitC-terminal	1	1
Beta-ketoacylsynthase,N-terminaldomain	1	1
Amidase	11	11
C-terminalregionofMMR_HSR1domain	1	1
CRM1Cterminal	1	1
ATP-graspdomain	1	1
Arginine-tRNA-proteintransferase,Cterminus	1	1
Histidinephosphatasesuperfamily(branch1)	7	7
Mitochondrialproteinup-regulatedduringmeiosis	1	1
Minichromosomelossprotein,Mcl1,middleregion	1	1
ATPcitratelasecitrate-binding	1	1
Syntaxin-likeprotein	1	1
ALG11mannosyltransferaseN-terminus	1	1
Scd6-likeSmdomain	1	1

RibosomalproteinsL26eukaryotic,L24Parchaeal	1	1
Phosphoribosylsynthetase-associateddomain	1	1
DRGFamilyRegulatoryProteins,Tma46	1	1
Cobalamin-independentsynthase,Catalyticdomain	5	5
Acyl-CoAdehydrogenase,N-terminaldomain	1	1
Sec23/Sec24trunkdomain	3	3
Domainofunknownfunction(DUF1771)	1	1
SETdomain	9	11
YjeF-relatedproteinN-terminus	3	3
DNAmitochondrialpolymeraseexonucleasedomain	1	1
Glycosyltransferasefamily28N-terminaldomain	1	1
3'exoribonucleasefamily,domain1	11	11
KRI1-likefamily	1	1
Caspasedomain	3	3
Eukaryoticaspartylprotease	13	13
Nucleolarcomplex-associatedprotein	1	1
Torusdomain	1	1
RibosomalproteinS3,C-terminaldomain	1	1
DomainfoundinIF2B/IF5	1	1
THOcomplexsubunit1transcriptionelongationfactor	1	1
DKCLD(NUC011)domain	1	1
DOCKN-terminus	1	1
VHSdomain	3	3
ReplicationfactorCC-terminaldomain	3	3
ExosomecomponentEXOSC1/CSL4	1	1
MIF4Glike	1	1
Nucleotideexchange factorFes1	1	1
DomainofunknownfunctioninPX-proteins(DUF3818)	1	1
Responseregulatorreceiverdomain	3	3
BTB/POZdomain	13	13

ICP0-bindingdomainofUbiquitin-specificprotease7	1	1
PPP5TPRrepeatregion	1	1
MediatorcomplexsubunitMed5	1	1
Nuclearprotein96	1	1
shortchaindehydrogenase	63	64
Pyridoxine5'-phosphateoxidaseC-terminaldimerisationregion	1	1
Ssl1-like	1	1
Glyoxalase/Bleomycinresistanceprotein/Dioxygenasesuperfamily	3	3
Cyclicnucleotide-bindingdomain	3	3
TranscriptioninitiationfactorIIA,gammasubunit	1	1
MOZ/SASfamily	3	3
Voltagegatedchloridechannel	3	3
Fis1C-terminaltetratricopeptiderepeat	1	1
Ku70/Ku80beta-barreldomain	1	1
FattyacidsynthasetypeIhelicaldomain	1	1
FMN-dependentdehydrogenase	5	5
BRO1-likedomain	1	1
TUP1-likeenhancerofsplit	1	1
PP-loopfamily	1	1
Nucleotidyltransferase	5	5
SPOCdomain	1	1
WWdomain	7	7
NGP1NT(NUC091)domain	1	1
PDZ-likedomain	5	5
RPELrepeat	1	1
Nup93/Nic96	1	1
VTCdomain	3	3
Glutamineamidotransferasesclass-II	1	1
Sof1-likedomain	1	1
RNApolymeraseRpb3/RpoAinsertdomain	1	1

Ferredoxin-foldanticodonbindingdomain	1	1
Smg-4/UPF3family	1	1
ZPR1zinc-fingerdomain	1	1
Glycerophosphoryldiesterphosphodiesterasefamily	3	3
2OG-Fe(II)oxygenasesuperfamily	9	9
Enoyl-CoAhydratase/isomerase	19	19
Aluminiumactivatedmalatetransporter	1	1
Utp21specificWD40associatedputativedomain	1	1
Histidinephosphatasesuperfamily(branch2)	9	9
MOSCdomain	3	3
Blt1N-terminaldomain	1	1
Svf1-likeC-terminallipocalin-likedomain	1	1
Phospholipidmethyltransferase	3	3
Eukaryotictranslationinitiationfactor3subunitG	1	1
Peptidasedimerisationdomain	1	1
Putativethreonine/serineexporter	3	3
NAD-dependentglycerol-3-phosphatedehydrogenaseC-terminus	1	1
Thiaminpyrophosphokinase,catalyticdomain	1	1
Putativeserinedehydratasedomain	1	1
Pro-kumamolisin,activationdomain	3	3
Sir2family	9	9
Nitriteandsulphitereductase4Fe-4Sdomain	1	1
tRNAmethyltransferasecomplexGCD14subunit	1	1
MitochondrialproteinfromFMP27	1	1
AbscisicacidG-proteincoupledreceptor	1	1
PeptidaseM16inactivedomain	1	1
FACTcomplexsubunit(SPT16/CDC68)	1	1
ANTHdomain	1	1
S1RNAbindingdomain	1	1
GlucoseinhibiteddivisionproteinA	1	0

Tyrosyl-DNAphosphodiesterase	1	1
Glycosylhydrolasefamily63C-terminaldomain	3	3
Creatinase/ProlidaseN-terminaldomain	1	1
Proteinofunknownfunction(Ytp1)	3	3
AnticodonbindingdomainoftRNAs	1	1
WD40associatedregioninTFIIDsubunit,NTD2domain	1	1
Hsp90protein	1	1
Glucanosyltransferase	5	5
Ubiquitin-conjugatingenzyme	25	25
CoAbindingdomain	3	3
Radical_SAMC-terminaldomain	1	1
TaurinecatabolismdioxygenaseTauD,TfdAfamily	14	14
AlphagalactosidaseA	3	3
SGSdomain	1	1
5'-nucleotidase,C-terminaldomain	3	3
Acyltransferase	9	9
Glutamineamidotransferaseclass-I	5	5
Quinolatephosphoribosyltransferase,C-terminaldomain	1	1
Nucleoporincomplexsubunit54	1	1
Haloaciddehalogenase-likehydrolase	19	19
Choline/ethanolaminekinase	3	3
ActivatorofHsp90ATPase,N-terminal	1	1
Ydr279pproteinfamily(RNaseH2complexcomponent)wHTHdomain	1	1
Tubulin-tyrosineligasefamily	3	3
Fusaricacidresistanceprotein-like	5	5
Las17-bindingproteinactinregulator	5	5
Phosphofructokinase	1	1
Pectatylasesuperfamilyprotein	1	1
EB1-likeC-terminalmotif	1	1
Beta-lactamasesuperfamilydomain	3	3

DENNdomain-containingprotein11	1	1
DnaJdomain	19	19
Exportin-T	1	1
DockingdomainofAfi1forArf3invesicletrafficking	1	1
Sugar(andothert)transporter	111	108
Cyclin,N-terminaldomain	3	3
RibosomalProteinsL2,C-terminaldomain	3	3
RNA-binding,Nab2-typezincfinger	1	1
CRAL/TRIOdomain	3	3
Thioredoxin-likedomain	1	1
Alphaamylase,catalyticdomain	3	3
Proteinphosphatase2C	9	9
CHORD	1	1
SHS2domainfoundinNterminusofRpb7p/Rpc25p/MJ0397	1	1
NPL4family	1	1
RNApolymeraseIIItranscriptionfactor(TF)IIICsubunitHTHdomain	1	1
Originrecognitioncomplex(ORC)subunit3N-terminus	1	1
Sec63Brldomain	1	1
SISdomain	1	1
Proteolysis_6C-terminal	1	1
Glutathione-dependentformaldehyde-activatingenzyme	13	13
Phosphoglucomutase/phosphomannomutase,C-terminaldomain	1	1
Lumazinebindingdomain	1	1
TFIIF,betasubunitN-terminus	1	1
6-phosphogluconatedehydrogenase,C-terminaldomain	1	1
Glycosylhydrolasesfamily15	1	1
tRNAsynthetasesclassIIcoredomain(F)	1	1
RNA3'-terminalphosphatecyclase	1	1
CAAXprenylproteaseN-terminal,fivemembranehelices	1	1
PITHdomain	1	1

ribosomalL5PfamilyC-terminus	1	1
PeptidaseM16Cassociated	1	1
Pyridoxal-dependentdecarboxylase,pyridoxalbindingdomain	1	1
Nucleoplasmin-likedomain	1	1
Proliferatingcellnuclearantigen,N-terminaldomain	1	1
Acetyl-CoAcarboxylase,centralregion	1	1
Mevalonate5-diphosphatedecarboxylaseC-terminaldomain	1	1
Phosphoadenosinephosphosulfatereductasefamily	3	3
Sortilin,neurotensinreceptor3,	1	1
Oligonucleotide/oligosaccharide-binding(OB)-fold	1	1
KilA-Ndomain	1	1
Fes/CIP4,andEFC/F-BARhomologydomain	1	1
GTPase-activatorproteinforRas-likeGTPase	3	3
IEC3subunitoftheIno80complex,chromatinre-modelling	1	1
Prolyl-tRNAsynthetase,C-terminal	1	1
Mono-functionalDNA-alkylatingmethyImethanesulfonateN-term	3	3
FissionyeastcentromereproteinN-terminaldomain	1	1
AN1-likeZincfinger	3	3
Regulated-SNARE-likedomain	1	1
Asparaginesynthase	3	3
Nuf2family	1	1
Ubiquitin-activatingenzymeactivesite	1	1
Glycosyltransferasefamily,a/bdomain	1	1
Familyofunknownfunction(DUF6314)	1	1
TranscriptionfactorTFIIBrepeat	1	1
Glycogendebranchingenzyme,glucanotransferasedomain	1	1
Pterinbindingenzyme	1	1
F-boxonlyproteinC-terminalregion	1	1
C-terminaldomainofSin3aprotein	1	1
16SrRNAmethyltransferaseRsmB/F	1	1

Dfp1/Him1,centralregion	1	1
Dimerisationandcyclophilin-bindingdomainofMon2	1	1
N-terminaldomainofribosephosphatepyrophosphokinase	1	1
SPFHdomain/Band7family	9	9
Homoserinedehydrogenase	1	1
Fructose-1-6-bisphosphatase,N-terminaldomain	1	1
Proteinofunknownfunction(DUF1604)	1	1
Hydroxymethylglutaryl-coenzymeAsynthaseCterminal	1	1
Peroxin13,N-terminalregion	1	1
Niemann-PickC1Nterminus	1	1
Respiratory-chainNADHdehydrogenase51Kdsubunit	1	1
Myo-inositol-1-phosphatesynthase	1	1
Glycosylhydrolasefamily47	9	9
GTPaseofunknownfunctionC-terminal	1	1
PhospholipaseDActivesitemotif	1	1
GammatubulincomplexcomponentC-terminal	1	1
Trehalase	3	3
PeptidasefamilyM20/M25/M40	1	1
EnolaseC-terminaldomain-like	3	3
OccludedRNA-recognitionmotif	1	1
Generalcontrolnonderepressible1(Gcn1)N-terminal	1	1
TranscriptionfactorTFIIDcomplexsubunit8C-term	1	1
Calponinology(CH)domain	1	1
CrcB-likeprotein,CamphorResistance(CrcB)	1	1
UncharacterizedproteinfamilyUPF0016	1	1
Uricase	1	1
Heavy-metal-associateddomain	3	3
PB1domain	1	1
SAMdomain(Sterilealphamotif)	7	7
Galactokinasegalactose-bindingsignature	1	1

X-domainofDnaJ-containing	1	1
Myristoyl-CoA:proteinN-myristoyltransferase,C-terminaldomain	1	1
TLD	3	3
Zincfinger,ZZtype	1	1
TLCdomain	3	3
Ribosomallargesubunitproteins60SL5,and50SL18	1	1
NIPSNAP	1	1
CobB/CobQ-likeglutamineamidotransferasedomain	1	1
Tetrapyrrole(Corrin/Porphyrin)Methylases	3	3
TAPC-terminaldomain	1	1
Acyl-CoAoxidase	1	1
Dualspecificityproteinphosphatase,N-terminalhalf	1	1
ATP-sulfurylase	1	1
CentrosominN-terminalmotif1	5	5
SDA1	1	1
Innermembranecomponentdomain	1	1
MolybdetetraporterofMFSsuperfamily	1	1
Domainofunknownfunction(DUF1977)	1	1
CorehistoneH2A/H2B/H3/H4	5	5
R3Hdomain	3	3
rRNA-processingarchdomain	1	1
DUF2407C-terminaldomain	1	1
Fourhelicalbundledomain	1	1
Domainofunknownfunction(DUF3336)	3	3
Ankyrinrepeats(manycopies)	5	5
PutativeNAD(P)-binding	1	1
Glycosyltransferasesgroup1	3	3
DNAtopoisomerase	3	3
NterminusofRad21/Rec8likeprotein	1	1
Biotin-requiringenzyme	1	1

CENP-BN-terminalDNA-bindingdomain	1	1
CTDkinasesubunitgammaCTK3	1	1
MidasinAAAliddomain	1	1
BP28CT(NUC211)domain	1	1
Hydroxyethylthiazolekinasefamily	1	1
RibosomalL28proteinfamily	3	3
CLASPNterminal	1	1
Domainofunknownfunction(DUF4210)	1	1
PPRrepeat	5	5
RibosomalproteinL11,RNAbindingdomain	1	1
Squaleneepoxidase	1	1
Domainofunknownfunction(DUF3337)	1	1
EF-handdomain	7	7
IndigoidinesynthaseAlikeprotein	1	1
KinasebindingproteinCGI-121	1	1
Rit1N-terminaldomain	1	1
Beta-lactamaseassociatedwingedhelixdomain	1	1
Rpn9C-terminalhelix	1	1
SprT-likefamily	3	3
1,3-beta-glucansynthasecomponent	1	1
PASdomain	3	3
Glucosyltransferase24	1	1
CoatmerWDassociatedregion	1	1
DNAreplicationcomplexGINSproteinSLD5C-terminus	1	1
Gelsolinrepeat	1	1
Glycosyltransferasefamily20	1	1
C-terminusofhistoneH2A	1	1
SPXdomain	1	1
Vacuolarprotein14C-terminalFig4pbinding	1	1
MIF4Gdomain	1	1

Exportin-5family	1	1
Putativepeptidasefamily	1	1
HSF-typeDNA-binding	1	1
PAP2superfamily	9	9
RPAP1-like,C-terminal	1	1
pre-mRNAprocessingfactor4(PRP4)like	1	1
Glycosylhydrolasefamily115	1	1
SHR-bindingdomainofvacuolar-sortingassociatedprotein13	1	1
GC-richsequenceDNA-bindingfactor-likeprotein	1	1
Ubiquitinelongatingfactorcore	1	1
ShugoshinN-terminalcoiled-coilregion	1	1
Zinc-ribbon	3	3
Rasfamily	29	29
ABCtransportertransmembraneregion2	1	1
LeucineRichrepeats(2copies)	1	1
UbiquitinfusiondegradationproteinUFD1	1	1
Guaninenucleotideexchange factorsynembryn	1	1
NucleoporinNup120/160	1	1
Histidyl-tRNAsynthetase	1	1
FYVEzincfinger	3	3
SBDSproteinC-terminaldomain	1	1
Serinecarboxypeptidase	7	7
MolybdenumCofactorSynthesisC	1	1
Skp1family,dimerisationdomain	1	1
Est1DNA/RNAbindingdomain	1	1
X-Prodipeptidyl-peptidaseC-terminalnon-catalyticdomain	1	1
MuniscinC-terminalmuhomologydomain	1	1
MitochondrialdegradasomeRNAhelicasesubunitCterminal	1	1
Gryzun,putativetraffickingthroughGolgi	1	1
Glycosylhydrolasefamily81C-terminaldomain	1	1

Chromoshadowdomain	1	1
HEATrepeats	3	3
Signalpeptidepeptidase	1	1
Signalrecognitionparticle,alphasubunit,N-terminal	1	1
DNApolymerasebetapalm	1	1
RhamnogalacturonanlyaseB,N-terminal	1	1
Tetrahydrofolatedehydrogenase/cyclohydrolase,catalyticdomain	1	1
EF-1guaninenucleotideexchangedomain	1	1
SisterchromatidcohesionC-terminus	1	1
2-oxoaciddehydrogenasesacyltransferase(catalyticdomain)	1	1
HSCBC-terminaloligomerisationdomain	1	1
Tuberculosisnecrotizingtoxin	1	1
AuxiliaryActivityfamily9(formerlyGH61)	7	7
PutativeSAM-dependentmethyltransferase	1	1
RibosomalproteinL7Ae/L30e/S12e/Gadd45family	9	9
CsbD-like	1	1
Aminotransferaseclass-V	7	7
LEM3(ligand-effectmodulator3)family/CDC50family	1	1
Carboxymuconolactonedecarboxylasefamily	1	1
Glycosylhydrolasesfamily17	5	5
Aldo/ketoreductasefamily	31	30
Maf1regulator	1	1
Mpp10protein	1	1
TypeI3-dehydroquinase	1	1
Peroxisomalmembraneprotein(Pex16)	1	1
Heterokaryonincompatibilityprotein(HET)	13	13
EpoxidehydrolaseNterminus	3	3
Uncharacterisedconservedprotein	1	1
Pal1cellmorphologyprotein	1	1
LMBR1-likemembraneprotein	3	3

Prolinedehydrogenase	3	3
Di-sulfidebridgenucleocytoplasmictransportdomain	1	1
TFIIShelicalbundle-likedomain	1	1
Thioesterase-likesuperfamily	7	7
Predictedintegralmembranezinc-ribbonmetal-bindingprotein	1	1
GRIPdomain	1	1
TCP-1/cpn60chaperoninfamily	16	15
EukaryotictranslationinitiationfactoreIF2A	1	1
Proteinofunknownfunction(DUF1691)	1	1
N-acetyltransferaseBcomplex(NatB)noncatalyticsubunit	1	1
Zinc-fingerdouble-strandedRNA-binding	5	5
Carboxylesterasefamily	7	7
Alpha/betahydrolasefamily	27	27
Phytanoyl-CoAdioxygenase(PhyH)	9	9
Methyltransferasedomain	47	47
Acetamidase/Formamidasefamily	1	1
GDA1/CD39(nucleosidephosphatase)family	1	1
Transmembraneaminoacidtransporterprotein	21	23
Adenosylmethioninedecarboxylase	1	1
NmrA-likefamily	35	37
ReplicationForkProtectionComponentSwi3	1	1
PRELI-likefamily	3	3
Bacterialtransferasehexapeptide(sixrepeats)	1	1
Lowmolecularweightphosphotyrosineproteinphosphatase	1	1
UcrQfamily	1	1
Proteinofunknownfunction(DUF1761)	1	1
Initiationfactor2subunitfamily	7	7
Acetyltransferase(GNAT)family	27	27
DNArepairproteinendonucleaseSAE2/CtIPC-terminus	1	1
Glycosylhydrolasecatalyticcore	3	3

Lyticpolysaccharidemono-oxygenase,cellulose-degrading	1	1
MeioticcellcortexC-terminalpleckstrinhomology	1	1
Opy2protein	1	1
Aldehydedehydrogenasefamily	34	34
HDdomain	11	11
Linalooldehydratase/isomerase	1	0
Tyrosinephosphatasefamily	5	5
Eukaryoticmitochondrialregulatorprotein	1	1
Carbon-nitrogenhydrolase	7	7
Lipase(class3)	11	11
Enoyl-(Acylcarrierprotein)reductase	52	53
Sulfotransferasedomain	1	1
Glycosylhydrolasesfamily11	3	3
N-Acetylglucosaminyltransferase-IV(GnT-IV)conservedregion	1	1
AcyclicterpeneutilisationfamilyproteinAtuA	3	3
ProteinofunknownfunctionDUF84	1	1
NAD(P)H-binding	15	15
PeptidaseS24-like	1	1
Spo12family	1	1
Mpv17/PMP22family	9	9
DSS1/SEM1family	1	1
Endonuclease/Exonuclease/phosphatasefamily	7	7
GPR1/FUN34/yaaHfamily	11	11
PXdomain	5	5
DJ-1/PfpIfamily	9	9
LSMdomain	17	17
Pan3Pseudokinasedomain	1	1
GATdomain	1	1
Fattyacidhydroxylasesuperfamily	13	13
ARP2/3complex20kDasubunit(ARPC4)	1	1

SerinecarboxypeptidaseS28	1	1
Peroxidase, family2	5	5
ClassIIAldolaseandAdducinN-terminaldomain	5	5
Autophagy-relatedprotein13	1	1
Cupindomain	11	11
Nucleartransportfactor2(NTF2)domain	1	1
Putativeadipose-regulatoryprotein(Seipin)	1	1
Phenazinebiosynthesis-likeprotein	1	1
IMP-specific5'-nucleotidase	1	1
MafB19-likedeaminase	3	3
Permeasefamily	3	3
AcylCoAbindingprotein	1	1
UreF	1	1
Shikimatekinase	3	3
Nitroreductasefamily	3	3
HPPfamily	1	1
Beta-lactamase	7	5
Glycosyltransferasesugar-bindingregioncontainingDXDmotif	5	5
YqcI/YcgGfamily	1	1
Cut12conserveddomain	1	1
Dihydrodipicolinatesynthetasefamily	11	11
Pre-mRNAsplicingPrp18-interactingfactor	1	1
RibosomalproteinL21e	1	1
Anp1	5	5
Zincfinger,C3HC4type(RINGfinger)	5	5
tRNAintronendonuclease,catalyticC-terminaldomain	3	3
PAXNEBprotein	1	1
RNAPolymeraseRpb8	1	1
Proteinofunknownfunction(DUF775)	1	1
zinc-RINGfingerdomain	1	1

Pre-mRNA-splicingfactorofREScomplex	1	1
Anaphase-promotingcomplexsubunit5	1	1
ComplexIntermediate-associatedprotein30(CIA30)	1	1
Tim44-likedomain	1	1
Phosphoenolpyruvatephosphomutase	5	5
RNA-bindingparticle68	1	1
Hsp70protein	9	9
Uncharacterisedprotein(DUF2415)	1	1
Coiled-coildomain-containingprotein124/Oxs1	1	1
Transaldolase/Fructose-6-phosphatealdolase	3	3
NFACTproteinRNAbindingdomain	1	1
RING-variantdomain	3	3
tRNApseudouridinesynthase	3	3
RibosomalproteinS7e	1	1
MitochondrialATPsynthasegsubunit	1	1
SecE/Sec61-gammasubunitsofproteintranslocationcomplex	1	1
Patatin-likephospholipase	2	2
T5orf172domain	1	1
Arrestin(orS-antigen),N-terminaldomain	3	3
POTfamily	5	5
Double-strandedDNA-bindingdomain	1	1
Sas10/Utp3/C1Dfamily	3	3
Pregnancy-associatedplasma protein-A	1	1
MycotoxinbiosynthesisproteinUstYa	3	3
UBXdomain	3	3
MYNDfinger	3	3
SURF1family	1	1
haloaciddehalogenase-likehydrolase	7	7
Domainofunknownfunction(DUF4452)	1	1
Ham1family	1	1

PeptidasefamilyC78	1	1
Wingsapart-likeproteinregulationofheterochromatin	1	1
Uracilphosphoribosyltransferase	3	3
TranscriptionelongationfactorElf1like	1	1
RibosomalS3Aefamily	1	1
Actininteractingprotein3	1	1
Lysophospholipasecatalyticdomain	5	5
IKI3family	1	1
Acyl-coenzymeA:6-aminopenicillanicacidacyl-transferase	1	1
Proteinofunknownfunction(DUF3984)	1	1
Hptdomain	1	1
Grap2andcyclin-D-interacting	1	1
AKAP72'5'RNAligase-likedomain	1	1
Rtf2RING-finger	1	1
Probablemolybdopterinbindingdomain	1	1
NUBPLiron-transferP-loopNTPase	3	3
TranscriptionfactorS-II(TFIIS)	3	3
Folliculin-interactingproteinN-terminus	1	1
Sin3bindingregionofhistonedecetylasecomplexsubunitSAP30	1	1
CaseinkinasesubstratephosphoproteinPP28	1	1
DNAprimasesmallsubunit	1	1
tRNA(Guanine-1)-methyltransferase	1	1
MitochondrialbiogenesisAIM24	1	1
Uncharacterisedproteinfamily(UPF0160)	1	1
cAMP-regulatedphosphoprotein/endosulfineconservedregion	1	1
Glutamate-cysteineligase	1	1
Familyofunknownfunction(DUF5308)	1	1
ArgonautesiRNACHaperone(ARC)complexsubunitArb1	1	1
Inositolpolyphosphatekinase	3	3
Proteolipidmembranepotentialmodulator	3	3

RibonucleaseIII domain	1	1
RTA1 like protein	17	17
LURP-one-related	1	1
Dyp-type peroxidase family	1	1
GRAB domain	1	1
CHD5-like protein	1	1
Transferase family	1	1
Protein trafficking PGA2	1	1
Heat shock factor binding protein 1	1	1
RING-H2 zinc finger domain	1	1
HpcH/HpaI aldolase/citrate lyase family	3	3
Bacterial extracellular solute-binding protein	1	0
Peptidyl-tRNA hydrolase PTH2	1	1
Sodium/hydrogen exchanger family	7	7
Pectinesterase	1	1
Phosphatidylinositol-glycan biosynthesis class S protein	1	1
Pyridoxal-dependent decarboxylase conserved domain	11	11
F-box domain	1	1
Ribosome biogenesis protein Nop16	1	1
G protein-coupled glucose receptor regulating Gpa2	3	3
Tannase and feruloyl esterase	3	3
CoA-transferase family III	5	5
2-phospho-L-lactate transferase CofD	1	1
Ergosterol biosynthesis ERG4/ERG24 family	1	1
Mannose-6-phosphate receptor	1	1
Acyltransferase family	3	3
Pectate lyase	21	21
Endoribonuclease L-PSP	13	13
Glutathione peroxidase	1	1
Peroxidase	9	9

PeptidasefamilyS58	1	1
Pyoverdine/dityrosinebiosynthesisprotein	3	3
Peroxin-3	1	1
Autophagy-relatedprotein101	1	1
Putativecyclase	1	1
EutQ-likecupindomain	1	1
L-rhamnosemutarotase	1	1
Etoposide-inducedprotein2.4(EI24)	3	3
S1/P1Nuclease	1	1
Arginasefamily	3	3
Aminotransferaseclass-III	11	11
Calpainfamilycysteineprotease	3	3
GlucosidaseIbetasubunit-likeprotein	1	1
NADH:flavinoxidoreductase/NADHoxidasefamily	13	13
RibonucleaseT2family	1	1
Autophagy-relatedprotein27	1	1
NADH-ubiquinoneoxidoreductaseB18subunit(NDUFB7)	1	1
Carbohydratephosphorylase	1	1
G-proteinalphasubunit	1	1
FHADomain	7	7
Respiratory-chainNADHdehydrogenase,30Kdsubunit	1	1
Phosphotyrosylphosphateactivator(PTPA)protein	3	3
GTPcyclohydrolaseII	1	1
Proteinofunknownfunction(DUF3591)	1	1
SRF-typetranscriptionfactor(DNA-bindinganddimerisationdomain)	1	1
Isocitrate/isopropylmalatedehydrogenase	9	9
Phosphoglucoseisomerase	1	1
MitochondrialribosomalsubunitS27	1	1
RibosomalproteinS24e	1	1
Lysinemethyltransferase	9	9

Fungalproteinofunknownfunction(DUF1774)	1	1
Putativeamidoligaseenzyme	3	3
PhosphomannoseisomerasetypeI	3	3
Trehaloseutilisation	1	1
SGF29tudor-likedomain	1	1
ADP-ribosylationfactorfamily	7	7
Amidohydrolase	25	25
Glycosylhydrolasesfamily28	5	5
GrpBprotein	1	1
Ppx/GppAphosphatasefamily	3	3
HomocysteineS-methyltransferase	1	1
Histone-liketranscriptionfactor(CBF/NF-Y)andarchaealhistone	7	7
Utp8family	1	1
Chitinsynthaseexportchaperone	1	1
Glycosylhydrolasesfamily16	15	15
Glycine-richdomain-containingprotein-like	5	5
Ribosomal silencing factor during starvation	1	1
Putative tRNA binding domain	1	1
VITfamily	1	1
NADdependentepimerase/dehydratasefamily	9	9
Ringhydroxylatingalphasubunit(catalyticdomain)	1	1
Isochorismatasefamily	1	1
GDSL-likeLipase/Acylhydrolasefamily	5	5
Cytidylyltransferase-like	7	7
EthanolamineutilisationproteinEutQ	1	1
Proteinofunknownfunction(DUF3445)	2	2
Phosphoesterasefamily	1	1
Chromatinassemblyfactor1subunitA	1	1
ubiE/COQ5methyltransferasefamily	3	3
Dienelactonehydrolasefamily	3	3

IGRproteinmotif	1	1
tRNAN6-adenosinethreonylcarbamoyltransferase	3	3
Enhancerofpolycomb-like	1	1
Polysaccharidedeacetylase	3	3
Phosphatidylinositol-specificphospholipaseC,Xdomain	3	3
Trypsin	1	1
Arrestin_Nterminallike	3	3
Luciferase-likemonooxygenase	1	1
Acetyltransferase(GNAT)domain	25	25
RadicalSAMsuperfamily	1	1
Proteinofunknownfunction(DUF1681)	1	1
Senescence-associatedprotein	1	1
GlycinecleavageH-protein	3	3
Serinehydroxymethyltransferase	3	3
SH3domain	5	5
Rtr1/RPAP2family	1	1
RibosomalS17	1	1
Fungalhydrophobin	1	1
Mitochondrialribosomalproteinsubunit	3	3
QueuinetRNA-ribosyltransferase	3	3
AminopeptidaseIzincmetalloprotease(M18)	3	3
Histonedeacetylasedomain	5	5
Membranedipeptidase(PeptidasefamilyM19)	5	5
3-betahydroxysteroiddehydrogenase/isomerasefamily	3	3
Beta-eliminatinglyase	5	5
Putativeheavy-metal-binding	1	1
ERproteinPkr1	1	1
Proteinofunknownfunction(DUF3808)	1	1
Xyloseisomerase-likeTIMbarrel	1	0
Fungaltrichotheceneeffluxpump(TRI12)	1	1

Proteinofunknownfunction(DUF1640)	3	3
GlutathioneS-transferase,C-terminaldomain	5	5
Polyketidecyclase/dehydraseandlipidtransport	3	3
60sAcidicribosomalprotein	1	1
SPT2chromatinprotein	1	1
EsterasePHBdepolymerase	3	3
IntegralmembraneproteinEMC3/TMCO1-like	1	1
Microsomalsignalpeptidase25kDasubunit(SPC25)	1	1
CFEMdomain	11	9
ATP11protein	1	1
Partialalpha/beta-hydrolaselipaseregion	1	1
Mycolicacidcyclopropanesynthetase	3	3
MaoClikedomain	3	3
TypeIphosphodiesterase/nucleotidepyrophosphatase	3	3
Prion-inhibitionandpropagation	1	1
Glycosyltransferasefamily8	3	3
Insulin-inducedprotein(INSIG)	1	1
Dephospho-CoAkinase	1	1
D-mannosebindinglectin	1	1
ERlumenproteinretainingreceptor	3	3
Tim17/Tim22/Tim23/Pmp24family	7	7
CSdomain	3	3
RibosomalproteinL3	11	11
LUC7N_terminus	1	1
Gpi16subunit,GPItransamidasecomponent	1	1
Proteinofunknownfunction(DUF2841)	1	1
Helix-loop-helixDNA-bindingdomain	17	17
NADH-ubiquinoneoxidoreductaseB12subunitfamily	1	1
Chitinsynthesisregulation,resistancetoCongored	3	3
PutativeS-adenosyl-L-methionine-dependentmethyltransferase	1	1

Protein of unknown function (DUF726)	3	3
Vps51/Vps67	3	3
Antibiotic biosynthesis monooxygenase	1	1
A49-like RNA polymerase associated factor	1	1
Family of unknown function (DUF5572)	1	1
Alg9-like mannosyl transferase family	5	5
GDSL-like Lipase/Acylhydrolase	9	7
Tim10/DDP family zinc finger	5	5
Glycosyl hydrolase family 76	5	5
GPI transamidase subunit PIG-U	1	1
RNA polymerase I specific transcription initiation factor	3	3
GWT1	1	1
Glycosyl transferase like family 2	1	1
Clr5 domain	7	7
Flavodoxin-like fold	1	1
Origin recognition complex subunit 2	1	1
Phosphoribosyl transferase domain	5	5
Mitochondrial domain of unknown function (DUF1713)	1	1
Histone acetyltransferase subunit 3	1	1
CybS, succinate dehydrogenase cytochrome B small subunit	1	1
Importin-beta N-terminal domain	3	3
Maf-like protein	1	1
Domain of unknown function (DUF3844)	1	1
Inositol phospholipid synthesis and fat-storage-inducing TM	1	1
LITAF-like zinc ribbon domain	1	1
Rhodanese-like domain	7	7
Hemerythrin HHE cation binding domain	3	3
SKIP/SNW domain	1	1
RNA polymerase Rpc34 subunit	1	1
emp24/gp25L/p24 family/GOLD	7	7

Proteinofunknownfunction(DUF1275)	1	1
IronpermeaseFTR1family	5	5
XLf-Cernunnos,XRcc4-likefactor,NHEJcomponent	1	1
RibosomalproteinS21e	1	1
Fic/DOCfamily	1	1
PhoD-likephosphatase	1	1
RibosomalproteinL14p/L23e	3	3
Familyofunknownfunction(DUF5427)	1	1
Sodium:solutesymporterfamily	3	1
Rrp15p	1	1
HMGL-like	1	1
Peptidemethioninesulfoxidereductase	1	1
Inhibitorofapoptosis-promotingBax1	3	3
Glycolipidtransferprotein(GLTP)	1	1
Inositolmonophosphatasefamily	5	5
Yip1domain	3	3
Glycosylhydrolasefamily45	1	0
Vps52/Sac2family	1	1
Rab-GTPase-TBCdomain	9	9
COMPASS(ComplexproteinsassociatedwithSet1p)componentshg1	1	1
RanBP1domain	1	1
RNApolymeraseI-specificinitiationfactor	1	1
ETCcomplexIsubunitconservedregion	1	1
Triose-phosphateTransporterfamily	9	9
Bin/amphiphysin/Rvsdomainforvesiculartrafficking	1	1
Arv1-likefamily	1	1
ChromosomesegregationproteinCsm1/Pcs1	1	1
PGAP1-likeprotein	1	1
Choline/Carnitineo-acyltransferase	3	3
pfkBfamilycarbohydratekinase	3	3

Exo70exocystcomplexsubunit	1	1
SecretorypathwayproteinSec39	1	1
Proteinofunknownfunction(DUF2838)	1	1
CytochromecoxidasesubunitVII	1	1
Clathrinlightchain	1	1
Serineaminopeptidase,S33	5	5
Proteinofunknownfunction(DUF3455)	1	1
MED6mediatorsubcomplexcomponent	1	1
RibosomalproteinL22p/L17e	1	1
Multiplemyelomatumor-associated	1	1
N2227-likeprotein	1	1
Proteasomeassemblychaperone4	1	1
Eukaryoticintegralmembraneprotein(DUF1751)	3	3
SPRYdomain	1	1
Proteinofunknownfunction(DUF3684)	1	1
DNA-directedRNAPolymeraseIsubunitRPA34.5	1	1
DNAPolymeraseIII,deltasubunit	1	1
RibosomalproteinL16p/L10e	3	3
Deoxyhypusinesynthase	1	1
ArgJfamily	1	1
BacteriallowtemperaturerequirementAprotein(LtrA)	5	5
GrpE	1	1
Imidazoleglycerol-phosphatedehydratase	1	1
Mob1/phoceinfamily	5	5
ATPsynthasedelta(OSCP)subunit	1	1
Putativeundecaprenyldiphosphatesynthase	1	1
InhibitorofgrowthproteinsN-terminalhistone-binding	3	3
TranscriptioninitiationfactorTFIIDcomponentTAF4family	1	1
Alanineracemase,N-terminaldomain	1	1
ARSbindingprotein2	1	1

Root hair defective 3GTP-binding protein (RHD3)	1	1
Ribonuclease HIII	1	1
2EXR family	9	9
Rad51	3	3
PSP1 C-terminal conserved region	1	1
SUR7/PalI family	5	5
Ribosome recycling factor	1	1
Up-regulated during septation	1	1
Gamma-glutamyl cyclotransferase, AIG2-like	5	5
Ribosomal protein L36	1	1
PLAC8 family	3	3
Transcription initiation factor IID, 31 kD subunit	1	1
Uracil DNA glycosylase superfamily	3	3
Protein of unknown function (DUF3752)	1	1
TEA/ATTS domain	1	1
RNA polymerase N/8 kD subunit	1	1
Protein of unknown function (DUF1479)	1	1
Eisosome component PIL1	1	1
Cerato-platanin	5	5
Ribosomal protein S18	1	1
GPI biosynthesis protein family Pig-F	1	1
Cytidine and deoxycytidylated deaminase zinc-binding region	5	5
Thioredoxin-like [2Fe-2S] ferredoxin	0	0
Vacuolar segregation subunit 7	1	1
T-complex protein 11	3	3
WKF domain	1	1
Interferon-related developmental regulator (IFRD)	1	1
Afadin and alpha-actinin-binding	1	1
Integral membrane protein DUF92	1	1
Domain of unknown function (DUF4588)	1	1

Glycosyltransferasefamily90	1	1
NADHubiquinoneoxidoreductase,20Kdsubunit	1	1
Nup85Nucleoporin	1	1
Anaphase-promotingcomplexsubunit1	1	1
PeptidasefamilyM48	1	1
Cupinsuperfamily(DUF985)	1	1
TranscriptionalCoactivatorp15(PC4)	1	1
Ureidoglycolatelyase	1	1
Mitochondriallargesubunitribosomalprotein(Img2)	1	1
RibosomalproteinL44	1	1
U3smallnucleolarRNA-associatedprotein6	1	1
Cut8,nuclearproteasometetherprotein	1	1
DSBA-likethioredoxindomain	5	5
O-methyltransferase	9	9
MediatorofRNAPolymeraseIItranscriptionsubunit1	1	1
PredictedSAM-dependentRNAmethyltransferase	1	1
TranscriptioninitiationfactorIID,18kDsubunit	1	1
Flavinatorofsuccinatedehydrogenase	1	1
U1zincfinger	1	1
CorA-likeMg ²⁺ transporterprotein	13	15
25SrRNA(adenine(2142)-N(1))-methyltransferase,Bmt2	1	1
Fungalproteinofunknownfunction(DUF2015)	1	1
Transportproteinparticle(TRAPP)component	5	5
Proteinofunknownfunction(DUF2423)	1	1
Nuclearcondensingcomplexsubunits,C-termdomain	1	1
MagnesiumtransporterNIPA	7	7
Translationallycontrolledtumourprotein	1	1
Mis12protein	1	1
Legume-likelectinfamily	1	1
Proteinofunknownfunction(DUF3767)	1	1

RibosomalproteinS11	3	3
Iron-sulphurclusterbiosynthesis	1	1
Ctrcoppertransporterfamily	3	3
RNApseudouridylatesynthase	1	1
NifU-likeNterminaldomain	1	1
HORMAdomain	3	3
Aldose1-epimerase	3	3
Subunit11ofthegeneraltranscriptionfactorTFIIH	1	1
PETassemblyofcytochromecoxidase,mitochondrial	1	1
Vacuolar(H ⁺)-ATPaseGsubunit	1	1
Catenin-beta-like,Arm-motifcontainingnuclear	1	1
Uncharacterisedproteinfamily(UPF0203)	1	1
RNAPolymeraseIItranscriptionmediatorcomplexsubunit9	1	1
Pyridoxamine5'-phosphateoxidase	7	7
TranscriptionmediatorcomplexsubunitMed12	1	1
RNAPolymeraseIItranscriptionelongationfactor	1	1
N-terminalC2inEEIG1andEHBP1proteins	1	1
Translationinitiationfactor1A/IF-1	3	3
ERCC4domain	3	3
Ubiquitincooxyl-terminalhydrolase,family1	5	5
Elongationcomplexprotein6	1	1
CBP4	1	1
Adenosine-deaminase(editase)domain	1	1
RibosomalproteinL24e	1	1
Redoxin	3	3
Fumble	1	1
Malatesynthase	1	1
CDP-alcoholphosphatidyltransferase	5	5
Copper/zincsuperoxidedismutase(SODC)	1	1
PeptidaseC1-likefamily	1	1

O-methyltransferasedomain	5	5
Mid2likecellwallstresssensor	1	1
UDP-glucuronosylandUDP-glucosyltransferase	1	1
ATPsynthase(C/AC39)subunit	1	1
Cnl2/NKP2familyprotein	1	1
RibosomalproteinS15	1	1
Uncharacterizedconservedprotein	7	7
Domainofunknownfunction(DUF1741)	1	1
RibosomalproteinL30p/L7e	1	1
6-O-methylguanineDNAmethyltransferase,DNAbindingdomain	1	1
Fructosaminekinase	1	1
Snf7	11	11
tRNA(Uracil-5-)-methyltransferase	1	1
Myosin-bindingstriatedmuscleassemblycentral	1	1
TranscriptionalrepressorTCF25	1	1
Flavincontainingamineoxidoreductase	7	7
CytochromecoxidaseassemblyproteinCtaG/Cox11	1	1
RNAPolymeraseRpb4	3	3
GPI-GlcNActransferasecomplex,PIG-Hcomponent	1	1
DNAPolymerasedelta,subunit4	1	1
PotentialQueosine,Q,salvageproteinfamily	1	1
Majorintrinsicprotein	1	1
Uncharacterizedproteinconservedinbacteria(DUF2263)	1	1
cwf21domain	1	1
PalH/RIM21	1	1
Cwf15/Cwc15cellcyclecontrolprotein	1	1
Familyofunknownfunction(DUF5321)	1	1
PeptidasefamilyC50	1	1
Proteinofunknownfunction(DUF3605)	3	3
SRP-independenttargetingprotein2/TMEM208	1	1

RibosomalproteinS10p/S20e	1	1
MitochondrialribosomalproteinL31	1	1
Prephenatedehydratase	1	1
Sulfotransferasefamily	1	1
Transcriptionalregulationofmitochondrialrecombination	1	1
PIG-X/PBN1	1	1
GDP-mannose4,6dehydratase	1	1
Brixdomain	9	9
RNasePsubunitPop3	1	1
DehydrogenaseE1component	3	3
Neurochondrin	1	1
RibosomalproteinS7p/S5e	1	1
Gtr1/RagAGproteinconservedregion	3	3
Hus1-likeprotein	1	1
eIF-6family	1	1
Necrosisinducingprotein(NPP1)	1	1
Growth-Arrest-SpecificProtein2Domain	1	1
50Sribosome-bindingGTPase	5	5
Lowtemperatureviabilityprotein	1	1
SAC3/GANPfamily	1	1
ERG2andSigma1receptorlikeprotein	1	1
Nuclearporecomplexcomponent	1	1
GolgiERtrafficprotein4	1	1
Uncharacterisedproteinfamily(UPF0220)	1	1
GDP/GTPexchangefactorSec2p	1	1
Eukaryoticporin	1	1
Smallsubunitofserinepalmitoyltransferase-like	1	1
RAI1likePD-(D/E)XKnuclease	1	1
CytochromecoxidasesubunitVa	1	1
GNS1/SUR4family	3	3

Cgr1family	1	1
Questinoxidase-like	1	1
Nucleosomeassemblyprotein(NAP)	3	3
LCCLdomain	1	1
Phospholipase/Carboxylesterase	3	3
Glycolipid2-alpha-mannosyltransferase	3	3
NuclearproteinEs2	1	1
Clathrinadaptorcomplexsmallchain	5	5
DomainofKin17curvedDNA-bindingprotein	1	1
Saf4/Yju2protein	3	3
rRNAbiogenesisproteinRRP36	1	1
RibosomalproteinS9/S16	3	3
VariantSH3domain	1	1
Pyridoxamine5'-phosphateoxidaselike	1	1
Extracellularmutantprotein11	1	1
Large-conductancemechanosensitivechannel,MscL	1	1
Leucine-richrepeat	1	1
TatDrelatedDNase	5	5
Non-classicalexportprotein1	1	1
Spc24subunitofNdc80	1	1
Ferrochelatase	1	1
Pathogeneffector putativenecrosis-inducingfactor	1	1
Nucleotide-sugartransporter	3	3
Lateendosomal/lysosomaladaptorandMAPKandMTORactivator	1	1
MED7protein	1	1
L-lysine6-monooxygenase(NADPH-requiring)	1	1
RibosomalproteinS8	7	7
Cornichonprotein	1	1
NADPH-dependentFMNreductase	3	3
FKBP-typepeptidyl-prolylcis-transisomerase	1	1

Eukaryotic cytochrome b561	1	1
Protein of unknown function (DUF2012)	1	1
Cys/Met metabolism PLP-dependent enzyme	5	7
Membrane-associating domain	7	7
Citrate synthase, C-terminal domain	3	3
Domain of unknown function (DUF3425)	5	5
Apc15p protein	1	1
Bacteriorhodopsin-like protein	1	1
Protein of unknown function (DUF1168)	1	1
Calcipressin	1	1
Neugrin	1	1
Met-10+like-protein	3	3
Origin recognition complex subunit 6 (ORC6)	1	1
RNAse PRpr2/Rpp21/SNM1 subunit domain	1	1
tRNA-splicing endonuclease subunit sen54N-term	1	1
Ribosomal protein L31e	1	1
RibDC-terminal domain	1	1
Regulator of volume decrease after cellular swelling	1	1
NOT2/NOT3/NOT5 family	1	1
CUE domain	5	5
Regulator of Vps4 activity in the MVB pathway	1	1
COPI associated protein	1	1
IBR domain, a half RING-finger domain	3	3
Lactonase, 7-bladed beta-propeller	5	5
Cysteine-rich TM module stress tolerance	1	1
Phytase	1	1
ChrRCupin-like domain	1	1
Short coiled-coil protein	1	1
Trafficking protein particle complex subunit 10, TRAPPC10	1	1
Mechanosensitive ion channel	1	1

SNOglutamineamidotransferasefamily	1	1
Domainofunknownfunction(DUF2828)	1	1
Chromo(CHRromatinOrganisationMOfifier)domain	1	1
HypotheticalproteinFLILHELTA	1	1
Amino-transferaseclassIV	5	5
SnareregionanchoredinthevesiclemembraneC-terminus	3	3
RibosomalRNAadeninedimethylase	3	3
Putativezincfingermotif,C2HC5-type	1	1
Nop53(60Sribosomalbiogenesis)	1	1
Ribose5-phosphateisomeraseA(phosphoriboisomeraseA)	1	1
InositolphosphorylceramidesynthasesubunitKei1	1	1
CatalyticLigBsubunitofaromaticring-openingdioxygenase	3	3
Mitochondrialdistributionandmorphologyprotein10	1	1
tRNAsynthetasesclassI(C)catalyticdomain	1	1
RNAPolymeraseI-associatedfactorPAF67	1	1
HistonemethylationproteinDOT1	1	1
Autophagyprotein16(ATG16)	1	1
Microtubuleassociatedprotein(MAP65/ASE1family)	1	1
TypeII CAAXprenylendopeptidaseRce1-like	1	1
Maintenanceofmitochondrialmorphologyprotein1	3	3
Domainofunknownfunction(DUF1772)	3	3
Microsomal signalpeptidase12kDasubunit(SPC12)	1	1
MBOAT,membrane-boundO-acyltransferasefamily	3	3
Guanylatekinase	1	1
PeptidasefamilyS41	1	1
Promethin	1	1
Glycosyltransferasefamily21	1	1
Retinoicacidinduced16-likeprotein	1	1
Dehydratasefamily	3	3
Thioesterasedomain	1	1

Damage-controlphosphataseARMT1-likedomain	1	1
Glycosylhydrolasesfamily32N-terminaldomain	3	3
Peptidyl-tRNAhydrolase	3	3
Chalconeisomeraselike	1	1
RibosomalproteinL13	3	3
PLD-likedomain	3	3
MembraneboundO-acyltransferasefamily	1	1
SAPdomain	1	1
Hamartinprotein	1	1
CHCHdomain	1	1
PHD-finger	5	5
SCO1/SenC	1	1
Complex1_LYR-like	5	5
Spermine/spermidinesynthasedomain	1	1
Primasezincfinger	1	1
DASHcomplexsubunitDuo1	1	1
ESSSsubunitofNADH:ubiquinoneoxidoreductase(complexI)	1	1
Alteredinheritanceofmitochondriaprotein21	1	1
UncharacterizedconservedproteinCG6151-P	1	1
SelRdomain	1	1
ARID/BRIGHTDNAbindingdomain	1	1
DiaphanousGTPase-bindingDomain	1	1
Platelet-activatingfactoracetylhydrolase,isoformII	1	1
Uncharacterizedconservedprotein(DUF2183)	1	1
cAMPphosphodiesterasesclass-II	1	1
Flavinreductaselikedomain	1	1
Sideroflexins	1	1
Domainofunknownfunction(DUF4045)	1	1
SMP-30/Gluconolactonase/LRE-likeregion	3	3
Whi5like	3	3

rRNAprocessing/ribosomebiogenesis	1	1
ER-boundoxygenasempaB/B'/Rubberoxygenase,catalyticdomain	1	1
TranscriptionfactorsubunitMed10ofMediatorcomplex	1	1
RNAPolymeraseRpb6	1	1
NRDE-2,necessaryforRNAinterference	1	1
Urb2/Npa2family	1	1
Domainofunknownfunction(DUF543)	1	1
Triosephosphateisomerase	1	1
MitochondrialribosomalproteinL51/S25/CI-B8domain	3	3
CaseinkinaseIIregulatorysubunit	3	3
RIC1	1	1
VMA21-likedomain	1	1
Opticatrophy3protein(OPA3)	1	1
Shwachman-Bodian-Diamondsyndrome(SBDS)protein	1	1
Dynamitin	1	1
RibosomalproteinS28e	1	1
Domainofunknownfunction(DUF4748)	1	1
TUGubiquitin-likedomain	1	1
Possiblelysinedecarboxylase	1	1
F-actincappingprotein,betasubunit	1	1
VacuoleeffluxerAtg22like	3	3
Proteinofunknownfunction(DUF3602)	7	7
PreproteintranslocasesubunitSec66	1	1
Regionofunknownfunction(DUF2417)	1	1
HMG(highmobilitygroup)box	3	3
Magobinding	1	1
Per1-likefamily	1	1
RibosomalprokaryoticL21protein	1	1
RibosomalproteinS8e	3	3
RWDdomain	1	1

Uncharacterizedalpha/betahydrolasedomain(DUF2235)	3	3
vonWillebrandfactortypeAdomain	1	1
Nbl1/BorealinNterminal	1	1
RNApolymeraseIItranscriptionfactorSIII(Elongin)subunitA	1	1
Fungaldomainofunknownfunction(DUF1750)	1	1
Cleftlipandpalatetransmembraneprotein1(CLPTM1)	1	1
Myosin-likecoiled-coilprotein	1	1
Domainofunknownfunction(DUF1993)	5	5
Haemolysin-IIIrelated	1	1
Fms-interactingprotein/Thoc5	1	1
Glycosyltransferasefamilygroup2	7	7
dUTPase	1	1
Mitochondrialcalciumuniporter	1	1
Cytochromec/c1hemelyase	1	1
CLN3protein	1	1
Nucleotide-diphospho-sugartransferase	1	1
Inorganicpyrophosphatase	1	1
Phosphatetransporterfamily	3	3
Familyofunknownfunction(DUF6454)	1	1
Murligasemiddledomain	1	1
ICE2	1	1
MSP(Majorspermprotein)domain	1	1
Proteinofunknownfunction(DUF2408)	1	1
YCII-relateddomain	1	1
3-demethylubiquinone-93-methyltransferase	1	1
MitochondrialribosomalproteinsubunitL20	1	1
Sec1family	3	3
CCCH-typezincfinger	1	1
Translinfamily	3	3
Gar1/Naf1RNAbindingregion	1	1

GINSclexprotein	1	1
Rieske[2Fe-2S]domain	0	0
R3H-associatedN-terminaldomain	1	1
ATPsynthasubunitK	1	1
Mitochondrial18KDaprotein(MTP18)	1	1
Permeasefor cytosine/purines,uracil,thiamine,allantoin	5	5
Glutamineamidotransferasedomain	1	1
ALG3protein	1	1
She9/Mdm33family	1	1
RibosomalproteinS12/S23	3	3
TopoisomeraseII-associatedproteinPAT1	1	1
RPC5protein	1	1
Endomembraneprotein70	1	1
Vitamin-D-receptorinteractingMediatorsunit4	1	1
U-boxdomain	1	1
Dihydroorotatedehydrogenase	1	1
Thioesterasesuperfamily	5	5
Diacylglycerolkinasecatalyticdomain	3	3
TIM21	1	1
FRG1-likedomain	1	1
Iron-sulfurclusterassemblyprotein	1	1
ElongatorsubunitIki1	1	1
Ubiquitin-likeautophagyproteinApg12	1	1
Ketopantoatehydroxymethyltransferase	1	1
FtsJ-likemethyltransferase	1	1
Flavoprotein	5	5
Poly(ADP-ribose)glycohydrolase(PARG)	1	1
Domainofunknownfunction(DUF4078)	1	1
Peroxisomalbiogenesisfactor11(PEX11)	1	1
Celldifferentiationfamily,Rcd1-like	1	1

Pex14N-terminaldomain	1	1
HEC/Ndc80pfamily	1	1
BindingdomainofDNArepairproteinErcc1(rad10/Swi10)	1	1
Iron-containingalcoholdehydrogenase	3	3
Asxhomologydomain	1	1
Proteinofunknownfunction(DUF3405)	5	5
Pex19proteinfamily	1	1
Uncharacterizedproteinconservedinbacteria(DUF2264)	3	3
Plus-3domain	1	1
TranscriptionalregulatorofRNAPolIII,SAGA,subunit	1	1
Breastcarcinomaamplifiedsequence2(BCAS2)	1	1
Hyaluronan/mRNAbindingfamily	1	1
Isocitratelasefamily	3	3
Yippeezinc-binding/DNA-binding/Mis18,centromereassembly	3	3
DNLzincfinger	1	1
Anion-transportingATPase	1	1
HIUase/Transthyretinfamily	1	1
RING-typezinc-finger	1	1
Glycoside-hydrolasefamilyGH114	5	5
MitochondrialexportproteinSom1	1	1
OST3/OST6family,transporterfamily	1	1
DNA mismatch repair protein HSM3, Nterminal domain	1	1
DNA-directedRNAPolymeraseIIIsubunitRpc31	1	1
Fip1motif	1	1
Alkalinephosphatase	1	1
Proteinofunknownfunction(DUF498/DUF598)	1	1
RibosomalproteinL34e	1	1
RibosomalproteinL32	1	1
AAR2protein	1	1
EAP30/Vps36family	1	1

MitochondrialimportreceptorsubunitTom22	1	1
YEATSfamily	3	3
Phosducin	3	3
AminotransferaseclassIandII	19	17
CytochromeC1family	1	1
GlcNAc-PIde-N-acetylase	1	1
Ceramidase	1	1
Squalene/phytoenesynthase	3	3
Mannosyltransferase(PIG-M)	1	1
Dyneinlightintermediatechain(DLIC)	1	1
Proteinofunknownfunction,DUF255	1	1
Proteintyrosineandserine/threoninekinase	1	1
Somethingaboutsilencing,SAS,complexsubunit4	1	1
CytochromeCoxidasecopperchaperone(COX17)	1	1
OligosaccharyltransferasesubunitRibophorinII	1	1
Hypoxiainducedproteinconservedregion	1	1
Proteinofunknownfunction(DUF3237)	1	1
Rpp20subunitofnuclearRNaseMRPandP	1	1
Serinehydrolase(FSH1)	3	3
Spc19	1	1
Dynactinsubunitp22	1	1
RibosomalproteinS16	1	1
PutativeRNAmethyltransferase	1	1
YeastcorticalproteinKAR9	1	1
SAICARsynthetase	1	1
TransportproteinTrs120orTRAPPC9,TRAPPIIcomplexsubunit	1	1
Dopa4,5-dioxygenasefamily	1	1
SURF4family	1	1
SWIMzincfinger	1	1
Nuclearporecomplexassembly	1	1

Polyprenylsynthetase	5	5
Alaninedehydrogenase/PNT,N-terminaldomain	1	1
Fringe-like	1	1
AmmoniumTransporterFamily	3	3
CRT10	1	1
ARP2/3complexARPC3(21kDa)subunit	1	1
7transmembranereceptor(Secretinfamily)	1	1
LicDfamily	1	1
3-oxo-5-alpha-steroid4-dehydrogenase	3	1
MINDYdeubiquitinase	1	0
RibosomalproteinS19	1	1
TranscriptioninitiationfactorTFIID23-30kDasubunit	1	1
Dihydroneopterinaldolase	1	1
OligosaccharidebiosynthesisproteinAlg14like	1	1
UTP--glucose-1-phosphateuridylyltransferase	1	1
XPAproteinC-terminus	1	1
Phosphatetransport(Pho88)	1	1
Ser-Thr-richglycosyl-phosphatidyl-inositol-anchoredmembranefamily	3	3
Polycystincationchannel	1	1
Macrodomain	1	1
RibonucleaseP/MRP,subunitp29	1	1
Pantoate-beta-alanineligase	1	1
Leo1-likeprotein	1	1
Alcoholacetyltransferase	3	3
PutativeFMN-bindingdomain	1	1
XAP5,circadianclockregulator	1	1
Alternariaalternataallergen1	1	1
KinetochorescomplexSim4subunitFta1	1	1
Conidiationprotein6	1	1
Fungalchitosanaseofglycosylhydrolasegroup75	1	1

Vacuolarproteinorting55	1	1
Exonuclease	11	11
Metal-independentalpha-mannosidase(GH125)	1	1
DNApolymerasesubunitCdc27	1	1
Thocomplexsubunit7	1	1
Nnf1	1	1
PutativeSin3bindingprotein	1	1
Proteinofunknownfunction(DUF1295)	1	1
Domainofunknownfunction(DUF4149)	1	1
Dolicholphosphate-mannosebiosynthesisregulatoryprotein(DPM2)	1	1
Dihydrouridinesynthase(Dus)	1	1
Leucinerichrepeat	3	3
Rdxfamily	1	1
GGLdomain	1	1
Zinc-fingerofmitochondrialsplicingssuppressor51	1	1
UBA-likedomain	1	1
Coiled-coildomain-containingprotein55(DUF2040)	1	1
HistoneacetyltransferaseHAT1N-terminus	1	1
GDPdissociationinhibitor	3	3
Mitochondrial39-SribosomalproteinL47(MRP-L47)	1	1
TranslocationproteinSec62	1	1
Peptidaseofplantsandbacteria	1	1
RibophorinI	3	3
Yqey-likeprotein	1	1
Krr1KH1domain	1	1
Chaperonin10Ksubunit	1	1
ComponentofIISlongevitypathwaySMK-1	1	1
Glycosyltransferasefamily2	9	11
RibosomalproteinL23	3	3
39SribosomalproteinL53/MRP-L53	1	1

RNApolIIaccessoryfactor,Cdc73family,C-terminal	1	1
Bystin	1	1
Sec20	1	1
PeptidasefamilyM3	3	3
Proteinofunknownfunction(DUF1304)	1	1
Ribosomalsubunit39S	1	1
DAHPsynthetaseIfamily	1	1
MAGEfamily	1	1
Splicingfactor3Bsubunit10(SF3b10)	1	1
ATP12chaperoneprotein	1	1
Inheritanceofperoxisomesprotein1	1	1
OTU-likecysteineprotease	1	1
Ribosome-assemblyprotein3	1	1
Gaa1-like,GPItransamidasecomponent	1	1
DASHcomplexsubunitDam1	1	1
Ran-interactingMog1protein	1	1
CSN8/PSMD8/EIF3Kfamily	3	3
Golgitransportcomplexsubunit5	1	1
Proteinofunknownfunction(DUF2434)	1	1
FAR-17a/AIG1-likeprotein	1	1
PeptidasefamilyC54	1	1
RibosomalproteinS17	1	1
Signalrecognitionparticle14kDprotein	1	1
Irononlyhydrogenaselargesubunit,C-terminaldomain	1	1
CHRDdomain	1	1
COQ9	1	1
THUMPdomain	1	1
Erv1/Alrfamily	1	1
SUZdomain	1	1
Uroporphyrinogen-III synthaseHemD	1	1

Domainofunknownfunction(DUF1917)	1	1
UncharacterisedACR,YggUfamilyCOG1872	1	1
HADdomainfamily1inSwissArmyKnifeRNArepairproteins	1	1
Inosine-uridinepreferringnucleosidehydrolase	1	1
Proteinofunknownfunction(DUF2985)	3	3
Proteinofunknownfunction(DUF3429)	1	1
SIT4phosphatase-associatedprotein	1	1
Rhomboidfamily	1	1
Eukaryoticproteinofunknownfunction(DUF829)	3	1
Ubiquitin-2likeRad60SUMO-like	3	3
Proteinofunknownfunction(DUF3292)	1	1
Med18protein	1	1
Uncharacterizedconservedprotein(DUF2293)	1	1
NUC173domain	1	1
Calcineurin-likephosphoesterasesuperfamilydomain	1	1
DASHcomplexsubunitDad2	1	1
Cytochromeoxidasecomplexassemblyprotein1	1	1
ChromosomesegregationproteinSpc25	1	1
Mitotic-spindleorganizinggamma-tubulinringassociated	1	1
Plasma-membranecholinetransporter	3	3
Sec61betafamily	1	1
Ribosomalproteins50S-L18Ae/60S-L20/60S-L18A	1	1
BRCA1CTerminus(BRCT)domain	1	1
Rap1-interactingfactor1Nterminal	1	1
Class-IIAHPsynthetasefamily	1	1
HYPKUBAdomain	1	1
RNasePsubunitp30	1	1
UncharacterisedACR,YagEfamilCOG1723	3	3
ATPsynthase	25	25
galactosyltransferaseGMA12/MNN10family	1	1

MFS/sugartransportprotein	1	1
MoaCfamily	1	1
Pet100	1	1
Nucleotidehydrolase	1	1
UncharacterisedproteinfamilyUPF0047	1	1
Zinc-fingerdomain	3	3
3'5'-cyclicnucleotidephosphodiesterase	1	1
RibosomalproteinL1p/L10efamily	3	3
WSTF,HB1,Irc1p,MBD9motif1	1	1
G10protein	1	1
Eukaryoticproteinofunknownfunction(DUF846)	1	1
Fcf1	1	1
Transmembraneprotein33/NucleoporinPOM33	1	1
Palmitoylproteinthioesterase	1	1
CVNHdomain	1	1
Ferritin-likedomain	3	3
Mitoticcheckpointprotein	1	1
OligosaccharyltransferaseSTT3subunit	1	1
ECL1/2/3zincbindingproteins	1	1
Dualspecificityphosphatase,catalyticdomain	3	3
Homeodomain	3	3
Alphaandgammaadaptinbindingproteinp34	1	1
Omp85superfamilydomain	1	1
DNA/pantothentatemetabolismflavoprotein	1	1
WWdomainbindingprotein11	1	1
Glycosylhydrolasesfamily31	1	1
Pre-rRNA-processingproteinTSR2	1	1
BSDdomain	1	1
Glucose-repressibleproteinGrg1	1	1
Invertebrate-AID/APOBEC-deaminase	1	1

Cytochromeoxidaseassemblyprotein	1	1
Sucrase/ferredoxin-like	1	1
4'-phosphopantetheinyltransferasesuperfamily	1	1
YIF1	1	1
ConservedhypotheticalATPbindingprotein	3	3
Nuclearporeassemblyandbiogenesis	1	1
Proteinofunknownfunction(DUF3074)	1	1
TAFII55proteinconservedregion	1	1
Serine-threonineproteinkinase19	1	1
ProteasomecomplexsubunitRpn13ubiquitinreceptor	1	1
RibosomalproteinL6e	1	1
ATP10protein	1	1
RibosomalL29protein	1	1
HCNGP-likeprotein	1	1
Proteinofunknownfunction(DUF3712)	3	3
TspO/MBRfamily	1	1
Thymidylatesynthase	1	1
ERmembraneproteinSH3	1	1
RED-likeproteinN-terminalregion	1	1
Subunit17ofMediatorcomplex	1	1
MethyltransferaseTYW3	1	1
ProteinofUnknownfunction(DUF1690)	1	1
Carboxyltransferasedomain	1	1
PeptidaseinhibitorI78family	1	1
TranslationmachineryassociatedTMA7	1	1
DNAdirectedRNAPolymerase,7kDasubunit	1	1
HITdomain	3	3
ChAPs(Chs5p-Arf1p-bindingproteins)	1	1
Symplekin/PTA1N-terminal	1	1
Coiled-coildomain-containingprotein56	1	1

Sds3-like	1	1
Prolineracemase	3	3
DNA double-strand break repair and V(D)J recombination protein XRCC4	1	1
WLM domain	1	1
Glycosylhydrolase family 1	7	7
NMT1/THI5 like	1	1
Vacuolar import and degradation protein	1	1
Magonashi protein	1	1
CENP-S protein	1	1
PPPDE putative peptidase domain	1	1
NADAR domain	1	1
Vacuolar protein sorting-associated protein 35	1	1
Myo-inositol oxygenase	1	1
Fungal protein of unknown function (DUF2011)	1	1
Cysteine-rich secretory protein family	1	1
Arrestin (or S-antigen), C-terminal domain	1	1
NDT80/PhoG like DNA-binding family	1	1
Mitochondrial ATPase expression	1	1
Alginate lyase	1	1
Electron transfer DM13	1	1
EXPERA (EXPanded EBP superfamily)	1	1
Snoal-like polyketide cyclase	1	1
Universal stress protein family	1	1
Surp module	1	1
Nitronate monooxygenase	7	7
3,4-dihydroxy-2-butanone 4-phosphate synthase	1	1
Eukaryotic initiation factor 4E	3	3
Zinc-finger of the MIZ type in Nse subunit	1	1
Spinocerebellar ataxia type 10 protein domain	1	1
Phosphorylase superfamily	1	1

TransportandGolgiorganisation2	1	1
Deuterolysinmetalloprotease(M35)family	1	1
Dolichol-phosphatemannosyltransferasesubunit3(DPM3)	1	1
Oxidoreductase-likeprotein,N-terminal	1	1
STAGdomain	1	1
UreDureaseaccessoryprotein	1	1
HNHendonuclease	1	1
TransmembraneadaptorErv26	1	1
Methylenetetrahydrofolatereductase	3	3
Proteasomestabiliser	1	1
56kDaseleniumbindingprotein(SBP56)	1	1
NADH-ubiquinoneoxidoreductaseASHIsubunit(CI-ASHIorNDUFB8)	1	1
Yeastmitochondrialdistributionandmorphology(MDM)proteins	1	1
TranslationinitiationfactoreIF3subunit	1	1
Alternativeoxidase	1	1
CBF/Mak21family	3	3
GRFzincfinger	1	1
Adenylylsulphatekinase	1	1
V-ATPasesubunitC	1	1
Modifierofrudimentary(Mod(r))protein	1	1
Nuclearporeprotein84/107	1	1
NitrogenPermeaseregulatorofaminoacidtransportactivity3	1	1
Rgp1	1	1
Fungalfamilyofunknownfunction(DUF1776)	1	1
Eukaryoticphosphomannomutase	1	1
Ykl077w/Psg1(Pma1StabilizationinGolgi)	1	1
JmjCdomain,hydroxylase	1	1
Complex1protein(LYRfamily)	1	1
Anaphase-promotingcomplexAPCsubunitCDC26	1	1
BolA-likeprotein	5	5

VPS28protein	1	1
Noc2pfamily	1	1
NAD(P)-bindingRossmann-likedomain	1	1
3-octaprenyl-4-hydroxybenzoatecarboxy-lyase	1	1
RNAcapguanine-N2methyltransferase	1	1
Metallo-beta-lactamasesuperfamily	5	5
Sulphurtransport	1	1
GRASP55/65PDZ-likedomain	1	1
AutophagyproteinApg5	1	1
LETM1-likeprotein	1	1
SCP-2steroltransferfamily	1	1
cwf18pre-mRNAsplicingfactor	1	1
CytochromecoxidasebiogenesisproteinCmc1like	1	1
RibosomalproteinL17	1	1
Delta-aminolevulinicaciddehydratase	1	1
Proteinofunknownfunction(DUF1279)	1	1
Mitochondrialimport2	1	1
ExosomecomplexexonucleaseRRP4N-terminalregion	1	1
Mitochondrialribosomalsubunitprotein	1	1
Domainofunknownfunction(DUF202)	1	1
RNAPolymeraseI-specifictranscriptioninitiationfactorRRN3	1	1
Tctex-1family	1	1
Zinccarboxypeptidase	5	5
Dopey,N-terminal	1	1
ribonuclease	29	29
RibosomalproteinS36,mitochondrial	1	1
RibosomalL28family	1	1
AutophagyproteinAtg8ubiquitinlike	1	1
Disorderedregionofunknownfunction(DUF5315)	1	1
UbiAprenyltransferasefamily	1	1

Mo25-like	1	1
RibosomalproteinL11methyltransferase(PrmA)	1	1
Uso1/p115likevesicletetheringprotein,headregion	1	1
Mitochondrialpyruvatecarriers	1	1
ProteasomematurationfactorUMP1	1	1
Proteinofunknownfunction(DUF1077)	1	1
SNARE-complexproteinSyntaxin-18N-terminus	1	1
Plastocyanin-likedomain	1	1
TubulinfoldingcofactorDCterminal	1	1
STIMATEfamily	1	1
Domainofunknownfunction(DUF1961)	1	1
Basicregionleucinezipper	1	1
FAM192A/Fyv6,N-terminaldomain	1	1
InnermembraneproteinimportcomplexsubunitTim54	1	1
KinetochoreproteinCHL4like	1	1
Nucleotideexchange factorSIL1	1	1
6,7-dimethyl-8-ribityllumazinesynthase	1	1
Hsp20/alphacrystallinfamily	1	1
Arp2/3complex,34kDsubunitp34-Arc	1	1
Vacuolarproteinorting-associatedprotein26	1	1
CentromereproteinH(CENP-H)	1	1
Staphylococcalnucleasehomologue	1	1
Respiratory-chainNADHdehydrogenase,49Kdsubunit	1	1
Corticalproteinmarkerforcellpolarity	1	1
MitochondrialATPsynthaseBchainprecursor(ATP-synt_B)	1	1
Telomere lengthregulationprotein	1	1
DNArepairmetallo-beta-lactamase	1	1
Splicingfactor3Bsubunit1	3	3
CCAAT-bindingtranscriptionfactor(CBF-B/NF-YA)subunitB	1	1
ASF1likehistonechaperone	1	1

Suppressorofforkedprotein(Suf)	1	1
L-asparaginaseII	1	1
DASHcomplexsubunitDad4	1	1
YL1nuclearproteinC-terminaldomain	1	1
Got1/Sft2-likefamily	1	1
Profilin	1	1
CytochromecoxidaseassemblyproteinCOX16	1	1
PRP38family	1	1
VRR-NUCdomain	1	1
Survivalmotorneuron(SMN)interactingprotein1(SIP1)	1	1
Ribonucleotidereductaseinhibitor	1	1
RibosomalproteinS27	1	1
SRP40,C-terminaldomain	1	1
Glutaminase	1	1
Translationmachinery-associatedprotein16	1	1
BNRrepeat-likedomain	1	1
Mitochondrialglycoprotein	1	1
Gamma-glutamyltranspeptidase	1	1
Semialdehydedehydrogenase,NADbindingdomain	1	1
Carbonicanhydrase	1	1
Domainofunknownfunction(DUF1989)	1	1
Glucosamine-6-phosphateisomerases/6-phosphogluconolactonase	3	3
CysteinedioxygenasetypeI	1	1
MAS20proteinimportreceptor	1	1
Proteinofunknownfunction(DUF3112)	1	1
Gammainterferoninduciblelysosomalthiolreductase(GILT)	1	1
Cns1/TTC4Wheeldomain	1	1
TAP42-likefamily	1	1
Reticulon	1	1
AMMECR1	1	1

DASHcomplexsubunitAsk1	1	1
OPToligopeptidetransporterprotein	3	3
5-formyltetrahydrofolatecyclo-ligasefamily	1	1
Microfibril-associated/Pre-mRNAprocessing	1	1
Signalrecognitionparticlereceptorbetasubunit	1	1
Succinatedehydrogenase/Fumaratereductasetransmembranesubunit	3	3
TranslationinitiationfactorIF-3,C-terminaldomain	1	1
Phosphatidylethanolamine-bindingprotein	3	3
RibosomalL27protein	1	1
Proteinphosphataseinhibitor2(IPP-2)	1	1
UV-endonucleaseUvdE	1	1
Thymidylatekinase	1	1
GLE1-likeprotein	1	1
ACTdomain	1	1
Proteinofunknownfunction(DUF1115)	1	1
HydrophobicsurfacebindingproteinA	1	1
10TMAcylTransferasedomainfoundinCas1p	3	3
MitochondrialproteinPet127	1	1
Ornithinecyclodeaminase/mu-crystallinfamily	1	1
BCCIP	1	1
Proteinofunknownfunction(DUF2418)	1	1
ATPsynthase(F/14-kDa)subunit	1	1
MLdomain	1	1
Sec8exocystcomplexcomponentspecificdomain	1	1
Glycosyltransferasefamily4	1	1
K+potassiumtransporter	1	1
OrganicsolutetransporterOstalpha	1	1
SMI1/KNR4family(SUKH-1)	1	1
Putativediphthamidesynthesisprotein	1	1
MitosisproteinDIM1	1	1

Proteinofunknownfunction(DUF1769)	1	1
Polysaccharidebiosynthesis	1	1
Purinenucleosidepermease(NUP)	1	1
Fungalproteinofunknownfunction(DUF1748)	1	1
GlycosylHydrolaseFamily88	1	1
Oligosaccharyltransferase48kDasubunitbeta	1	1
IntegralmembraneproteinSlinkingtothetransGolginetwork	1	1
CytochromeoxidasecsubunitVIb	3	3
Phosphatidylinositol-4-phosphate5-Kinase	1	1
NACHTdomain	1	1
DNAreplicationandcheckpointprotein	1	1
CENP-Q,aCENPA-CADcentromerecomplexsubunit	1	1
Nop14-likefamily	1	1
ProteinadenylyltransferaseSelO	1	1
Smallacidicproteinfamily	1	1
RibosomeassociatedmembraneproteinRAMP4	1	1
TB2/DP1,HVA22family	1	1
RFXDNA-bindingdomain	1	1
Frag1/DRAM/Sfk1family	1	1
RibosomalproteinS13/S18	1	1
Trm112p-likeprotein	1	1
Nucleolarprotein12(25kDa)	1	1
Tropomyosinlike	1	1
Domainofunknownfunction(DUF4202)	1	1
CyanatylaseC-terminaldomain	1	1
EukaryoticrRNAprocessingproteinEBP2	1	1
PhosphatidylinositolN-acetylglucosaminyltransferasesubunitY	1	1
Domainofunknownfunction(DUF4203)	1	1
RibosomalL38proteinfamily	1	1
COG(conservedoligomericGolgi)complexcomponent,COG2	1	1

HAUSaugmin-likecomplexsubunit6N-terminus	1	1
OutermembraneproteinTOM13	1	1
60Kdinnermembraneprotein	1	1
Proteinofunknownfunction(DUF1688)	1	1
GIY-YIGcatalyticdomain	1	1
CoA-ligase	1	1
Glycosylhydrolasefamily12	1	1
N-acetyltransferase	7	7
LysMdomain	1	1
Vacuolarproteinorting-associatedprotein62	1	1
RibosomalproteinL19	1	1
TranscriptionfactorTFIIHcomplexsubunitTfb5	1	1
RibosomalL22eproteinfamily	1	1
HhH-GPDsuperfamilybaseexcisionDNArepairprotein	1	1
Integralperoxisomalmembraneperoxin	1	1
Celldivisioncontrolprotein14,SINcomponent	1	1
Rer1family	1	1
Paf1	1	1
MoaEprotein	1	1
ATPsynthase(E/31kDa)subunit	1	1
HeterokaryonincompatibilityproteinHet-C	1	1
Rix1complexcomponentinvolvedin60Sribosomematuration	1	1
RanGTP-bindingprotein	1	1
RXT2-like,N-terminal	1	1
Riboflavinkinase	1	1
CopperfistDNAbindingdomain	1	1
DNArepairproteinCrb2Tudordomain	1	1
SYF2splicingfactor	1	1
homogentisate1,2-dioxygenase	3	3
Sen15protein	1	1

AhpC/TSAantioxidantenzyme	1	1
SCA7,zinc-bindingdomain	1	1
Beta-1,3-glucanase	1	1
Domainofunknownfunction(DUF4112)	1	1
Ribonucleotidereductase,smallchain	1	1
Signalrecognitionparticle9kDaprotein(SRP9)	1	1
Proteinofunknownfunction(DUF1682)	1	0
Cutinase	1	1
RibosomalL37aeproteinfamily	1	1
SaccharopinedehydrogenaseNADPbindingdomain	1	1
VanZlikefamily	1	1
Protein-tyrosinephosphatase	1	1
Regulatorofchromosomecondensation(RCC1)repeat	1	1
Sec34-likefamily	1	1
RINT-1/TIP-1family	1	1
Ca ²⁺ regulatorandmembranefusionproteinFig1	1	1
Programmedcelldeathprotein2,C-terminalputativedomain	1	1
NIF3(NGG1pinteractingfactor3)	1	1
RecQmediatedgenomeinstabilityprotein	1	1
Proteinofunknownfunction(DUF2370)	1	1
Protein-L-isoaspartate(D-aspartate)O-methyltransferase(PCMT)	1	1
Phosphopantetheineattachmentsite	1	1
GRIM-19protein	1	1
SOCE-associatedregulatoryfactorofcalciumhomoeostasis	1	1
Utp11protein	1	1
Domainofunknownfunction(DUF4440)	1	1
EndoplasmicReticulumOxidoreductin1(ERO1)	1	1
Vps54-likeprotein	1	1
RIO1family	1	1
RNAdependentRNAPolymerase	1	1

StressresponsiveA/BBarrelDomain	1	1
Malate/L-lactatedehydrogenase	1	1
VEFS-Boxofpolycombprotein	1	1
Putativeserineesterase(DUF676)	1	1
Diacylglycerolacyltransferase	1	1
Rox3mediatorcomplexsubunit	1	1
SRP19protein	1	1
Uroporphyrinogendecarboxylase(URO-D)	1	1
Dor1-likefamily	1	1
Timelessprotein	1	1
Glycogensynthase	1	1
RibosomalproteinS6	3	3
Ribosomalproteins50S-L15,50S-L18e,60S-L27A	1	1
OHCUdecarboxylase	1	1
Polysaccharidepyruvyltransferase	1	1
Proteinofunknownfunction(DUF2470)	1	1
SNAREassociatedGolgiiprotein	1	1
RibosomalproteinS6e	1	1
LsmADdomain	1	1
HITzincfinger	1	1
OsmC-likeprotein	1	1
Domainofunknownfunction(DUF5102)	1	1
MitochondrialATPaseinhibitor,IATP	1	1
Formate/nitritetransporter	1	1
MitochondrialribosomalproteinmL59	1	1
CytochromecoxidasesubunitIV	1	1
GYFdomain	1	1
Silencingdefective2N-terminalubiquitinomain	1	1
Plectin/S10domain	1	1
Proteinphosphataseinhibitor	3	3

Glu-tRNA ^{Gln} amidotransferase C subunit	1	1
Soluble NSF attachment protein, SNAP	1	1
BNR repeat-containing family member	1	1
Domain of unknown function (DUF4185)	1	1
Apolipoprotein O	1	1
RNA 2'-phosphotransferase, Tpt1/KptA family	1	1
Double-stranded RNA binding motif	1	1
rRNA-processing protein Efg1	1	1
Zinc-ribbon like family	1	1
TIP41-like family	1	1
Peptidase M76 family	1	1
Eukaryotic and archaeal DNA primase, large subunit	1	1
Protein of unknown function (DUF3533)	1	1
Male sterility protein	0	1
Ketopantoate reductase PanE/ApbA	5	7
Bacterial protein of unknown function (DUF885)	0	1
Glycosyltransferase family 28C-terminal domain	0	1

Supplementary data 2-Table 3 : predicted accessory-gene families of *Fusarium oxysporum*. f. sp *albedinis* strains.

Gene families	<i>Fusarium oxysporum</i> . f. sp <i>albedinis</i> 133	<i>Fusarium oxysporum</i> . f. sp <i>albedinis</i> 9
	Gene count	Gene count
Sugar(andothert)transporter	278	291
AuxiliaryActivityfamily9(formerlyGH61)	21	19
Acyl-CoAdehydrogenase,C-terminaldomain	15	15
Phosphorylasesuperfamily	29	27
WDdomain,G-betarepeat	51	35
Fungalspecifictranscriptionfactordomain	692	693
N-terminaldomainofNWDNACHT-NTPase	13	9
Tc5transposaseDNA-bindingdomain	41	41
Ankyrinrepeats(3copies)	222	202
FungalZn(2)-Cys(6)binuclearclusterdomain	249	239
DDEsuperfamilyendonuclease	172	533
Zincfinger,C2H2type	43	51
Poly(ADP-ribose)polymerasecatalyticdomain	21	22
Helitronhelicase-likedomainatN-terminus	29	146
Reversetranscriptase(RNA-dependentDNAPolymerase)	106	304
Cyclin,N-terminaldomain	31	34
RegulatorofGproteinsignalingdomain	9	9
Cutinase	19	19
Sodium:neurotransmittersymporterfamily	5	3
CoAbindingdomain	9	7
helix-turn-helix,Psqdomain	13	7
TransposaseIS4	62	92
E1-E2ATPase	23	31
DEAD/DEAHboxhelicase	35	31
Prolyloligopeptidasefamily	13	13

Tetratricopeptiderepeat	35	33
Conservedmidregionofcactin	1	1
Responseregulatorreceiverdomain	17	15
MULEtransposasedomain	35	165
CytochromeP450	305	312
Slx4endonuclease	1	1
Heterokaryonincompatibilityprotein(HET)	262	263
tRNAsynthetasesclassII(D,KandN)	7	7
MatE	9	9
FMN-dependentdehydrogenase	27	27
KRdomain	7	5
PIF1-likehelicase	31	25
CBSdomain	7	7
Zincfinger,ZZtype	3	3
Glycosylhydrolasesfamily2	33	31
Zinc-bindingdehydrogenase	113	115
Stress-inducedbacterialacidophilicrepeatmotif	5	5
GAG-pre-integrasedomain	5	5
RhoGAPdomain	5	5
Pectatelyase	23	23
AminotransferaseclassIandII	51	50
HMGL-like	5	5
FADbindingdomain	228	231
Carboxylesterasefamily	71	72
Proteinofunknownfunction(DUF3500)	11	11
Proteinofunknownfunction(DUF3435)	13	11
RNaseH-likedomainfoundinreversetranscriptase	13	94
HelicaseconservedC-terminaldomain	19	15
AlcoholdehydrogenaseGroES-likedomain	71	74
Middleorthirddomainofpeptidase_M16	7	7

Endonuclease-reversetranscriptase	22	19
CoA-ligase	1	1
Subtilasefamily	66	69
NterminusofRad21/Rec8likeprotein	5	9
Proteinofunknownfunction(DUF3295)	25	25
PutativeERtransporter,6TM,N-terminal	7	7
Ubiquitinfamily	7	7
Lateexocytosis,associatedwithGolgitransport	1	0
Mono-functionalDNA-alkylatingmethylethanesulfonateN-term	1	1
Extracellulartail,of10TMputativephosphatetransporter	5	0
Voltage-dependentanionchannel	15	15
Up-frameshiftsuppressor2	1	1
Mo-cooxidoreductasedimerisationdomain	1	1
Regulatorofchromosomecondensation(RCC1)repeat	9	11
Histidinekinase-,DNAgyraseB-,andHSP90-likeATPase	15	13
Adenylatecyclaseassociated(CAP)Cterminal	1	1
Sec23/Sec24trunkdomain	1	1
Glycosyltransferasefamily41	1	1
RecF/RecN/SMCNterminaldomain	3	3
PutativeTPR-likerepeat	1	1
Sec7domain	3	3
DNApolymerasebetathumb	1	1
Glycosylhydrolasefamily47	9	9
EF-handdomainpair	3	3
Ringhydroxylatingalphasubunit(catalyticdomain)	9	9
Ubiquitincoaxyl-terminalhydrolase,family1	3	3
SAPdomain	1	9
Proteinkinasedomain	187	197
Ferricreductaseliketranmembranecomponent	21	19
CAP-Glydomain	1	1

Pre-mRNA3'-end-processingendonucleasepolyadenylationfactorC-term	1	1
RNA12protein	1	1
AMP-bindingenzyme	91	87
Calcineurin-likephosphoesterase	31	33
IMPdehydrogenase/GMPreductasedomain	1	1
PutativeTOS1-likeglycosylhydrolase(DUF2401)	1	1
Proteinofunknownfunction(DUF3433)	9	7
GolgiCORVETcomplexcorevacuolarprotein8	1	1
UbiquitincooXyl-terminalhydrolase	13	11
RNArecognitionmotif.(a.k.a.RRM,RBD,orRNPdomain)	45	45
non-haemdioxygenaseinmorphinesynthesisN-terminal	15	13
Glycosylhydrolasefamily3C-terminaldomain	45	40
Sel1repeat	5	5
Zincknucle	15	25
Autophagy-relatedprotein2CADmotif	1	1
Spermine/spermidinesynthasedomain	1	1
Conidiationprotein6	1	1
RibosomalRNA-processingprotein7(RRP7)C-terminaldomain	1	1
Glutaminesynthetase,catalyticdomain	7	7
HhH-GPDsuperfamilybaseexcisionDNArepairprotein	3	3
Bacterialalpha-L-rhamnosidase6hairpinglycosidasedomain	33	33
Cytochromedomainofcellobiosedehydrogenase	9	9
SpoUrRNAMethylasefamily	1	1
YL1nuclearprotein	1	1
Domainofunknownfunction(DUF1744)	1	1
Eukaryotictranslationinitiationfactor3subunit8N-terminus	1	1
RibosomalproteinS10p/S20e	1	1
Oxidoreductasefamily,NAD-bindingRossmannfold	25	33
UEVdomain	1	1
Glycosylhydrolasefamily45	1	1

RNApolymeraseRpb2,domain6	1	1
ElongationfactorTuGTPbindingdomain	9	9
NADH:flavinoxidoreductase/NADHoxidasefamily	39	43
ABC-2typetransporter	30	31
RibonucleasesP/MRPproteinsubunitPOP1	1	1
GlutathioneS-transferase,C-terminaldomain	5	5
AAAdomain	27	24
C-5cytosine-specificDNAmethylase	3	3
Prenylcysteinelyase	1	1
VID27C-terminalWD40-likedomain	1	1
Phosphatidylinositol3-and4-kinase	3	3
Glutamineamidotransferaseclass-I	5	5
NFACTproteinC-terminaldomain	1	1
Phosphatidylinositol-specificphospholipaseC,Xdomain	13	15
Cellulase(glycosylhydrolasefamily5)	19	19
ABCtransportertransmembraneregion	35	31
RibosomalproteinS2	7	7
MRG	1	1
Asparaginase	7	7
Thiolase,N-terminaldomain	9	7
FerricreductaseNADbindingdomain	11	11
Sec23-bindingdomainofSec16	1	1
SnoaL-likedomain	24	22
TLCdomain	3	3
ATPasefamilyassociatedwithvariouscellularactivities(AAA)	45	43
Myb-likeDNA-bindingdomain	23	25
Aminotransferaseclass-III	17	17
Pep3/Vps18/deeporangefamily	1	1
Domainofunknownfunction(DUF3517)	1	1
SAPK-interactingprotein1(Sin1),middleCRIMdomain	1	1

Arginasefamily	11	11
Anaphase-promotingcomplex,cyclosome,subunit4	1	1
Phenylalanyl-tRNA-synthetasebetachainCLMdomain	1	1
Intron-bindingproteinaquariusN-terminus	1	1
MIF4Gdomain	1	1
Fcf1	1	1
ribosomalL5PfamilyC-terminus	1	1
MajorFacilitatorSuperfamily	541	560
TOM7family	1	1
Cohesinloadingfactor	1	1
ABCtransportertransmembraneregion2	1	1
Carbon-nitrogenhydrolase	27	27
Elongationfactor1gamma,conserveddomain	1	1
PeptidaseC13family	1	1
MoeAN-terminalregion(domainIandII)	3	3
Fasciclindomain	9	9
Domainofunknownfunction(DUF1729)	5	5
Beta-lactamasesuperfamilydomain	13	11
Glycolipid2-alpha-mannosyltransferase	3	3
Initiationfactor2subunitfamily	1	1
DILdomain	1	1
Allantoicaserepeat	1	1
impB/mucB/samBfamily	5	5
Myosinhead(motordomain)	1	1
UBA-likedomain	1	1
ForminHomology2Domain	1	1
Velvetfactor	3	3
Ankyrinrepeats(manycopies)	15	13
SerinecarboxypeptidaseS28	1	1
RNaseH	33	120

Aminoacidpermease	173	178
GMCoxidoreductase	47	54
Beta-lactamase	55	51
RibosomalproteinS5,N-terminaldomain	1	1
Ferroportin1(FPN1)	1	1
Putativeserineesterase(DUF676)	7	7
AconitaseX	1	1
Glycosylhydrolasesfamily31	13	13
PeptidasefamilyM20/M25/M40	15	15
ThiFfamily	3	3
Calcium-dependentchannel,7TMregion,putativephosphate	9	11
Pyrroline-5-carboxylatereductasedimerisation	1	1
Catalase	9	9
Glycosyltransferasefamily20	3	3
MutSdomainV	7	7
SaccharopinedehydrogenaseC-terminaldomain	1	0
RTA1likeprotein	66	64
Glycosylhydrolasesfamily2,sugarbindingdomain	3	3
Phosphoribulokinase/Uridinekinasefamily	3	3
PX-associated	1	1
Vps16,N-terminalregion	1	1
FHADomain	1	1
Haem-degrading	1	1
SNF2-relateddomain	35	35
ABCtransporter	61	57
Endonuclease/Exonuclease/phosphatasefamily	7	7
Iron/manganesesuperoxidedismutases,C-terminaldomain	1	1
ATP-NADkinaseC-terminaldomain	1	1
Squalene-hopenecyclaseC-terminaldomain	1	1
Splicingfactor1helix-hairpindomain	1	1

Carboxyltransferasedomain,subdomainAandB	1	1
Lyase	7	7
Tubulin/FtsZfamily,GTPasedomain	7	7
Alpha-L-arabinofuranosidaseB,catalytic	1	1
Patatin-likephospholipase	21	29
DNAreplicationfactorDna2	1	1
MnmEhelicaldomain	1	1
Glyoxalase/Bleomycinresistanceprotein/Dioxygenasesuperfamily	21	23
N-Acetylglucosaminyltransferase-IV(GnT-IV)conservedregion	3	3
ADP-ribosylationfactorfamily	11	11
Domainofunknownfunction(DUF5597)	5	5
Actin	11	11
Isocitrate/isopropylmalatedehydrogenase	9	9
DnaJdomain	13	15
U1smallnuclearribonucleoproteinof70kDaMWNterminal	1	1
Nucleartransportfactor2(NTF2)domain	1	1
Glycosylhydrolasefamily20,catalyticdomain	5	5
Glucose-6-phosphatedehydrogenase,C-terminaldomain	1	1
Choline/Carnitineo-acyltransferase	1	1
RibosomalproteinL35Ae	1	1
BCS1Nterminal	5	5
Ubiquitin-conjugatingenzyme	15	15
CationtransportingATPase,C-terminus	15	15
PhoDrelatedphosphatase	3	3
PeptidaseM16inactivedomain	1	1
SERRATE/Ars2,N-terminaldomain	1	1
Nas2N_terminaldomain	1	1
ATPsynthasealpha/betafamily,nucleotide-bindingdomain	5	5
Sulfatepermeasefamily	5	11
KHdomain	3	3

Glycosylhydrolasefamily10	11	13
Not1N-terminaldomain,CCR4-Notcomplexcomponent	1	1
Glycosylhydrolasesfamily43	39	44
SH3domain	9	9
EAP30/Vps36family	1	1
PI31proteasomeregulatorN-terminal	1	1
NADbindingdomainof6-phosphogluconatedehydrogenase	15	19
DIE2/ALG10family	1	1
N2,N2-dimethylguanosinetRNAmethyltransferase	1	1
Asparaginase,N-terminal	5	5
Mitochondrialcarrierprotein	25	27
Thermolysinmetallopeptidase,alpha-helicaldomain	1	1
Oxoglutarateandiron-dependentoxygenasedegradationC-term	1	1
Phospholipase/Carboxylesterase	7	7
ExocystcomplexcomponentSec3	1	1
Rieske[2Fe-2S]domain	0	0
Permeasefor cytosine/purines,uracil,thiamine,allantoin	19	21
Glycosylhydrolasesfamily2,TIMbarreldomain	5	5
Domainofunknownfunction(DUF5601)	1	1
Kelchmotif	9	9
Platelet-activatingfactoracetylhydrolase,isoformII	7	7
Copperamineoxidase,enzymedomain	13	15
Seryl-tRNAsynthetaseN-terminaldomain	1	1
Aldehydedehydrogenasefamily	83	87
Prolyl-tRNAsynthetase,C-terminal	3	1
LIMdomain	3	3
Eukaryoticporin	1	1
RNAhelicase(UPF2interactingdomain)	1	1
Glycosylhydrolasefamily7	31	31
SH2domain	1	1

DWNNdomain	1	1
MmgE/PrpDN-terminaldomain	3	3
NmrA-likefamily	164	152
2-oxoaciddehydrogenasesacyltransferase(catalyticdomain)	7	7
NucleoporinFGrepeatregion	3	3
Alpha/betahydrolasefamily	64	67
Polysaccharidedeacetylase	13	15
Chitinsynthase	9	9
UDP-glucose/GDP-mannosedehydrogenasefamily,centraldomain	5	5
Voltagegatedchloridechannel	3	3
Rapamycin-insensitivecompanionofmTOR,N-term	1	1
Trypsin-likepeptidasedomain	3	3
Alkalimetalcation/H ⁺ antiporterNha1Cterminus	1	1
HomodimerisationdomainofSGTA	1	1
SecondBRCTdomainonNijmegensyndromebreakageprotein	1	1
TRF2-interactingtelomericprotein/Rap1-Cterminaldomain	1	1
MetalbindingdomainofAda	1	1
Vaultproteininter-alpha-trypsindomain	3	3
N-terminaldomainoflipoylsynthaseofRadical_SAMfamily	1	1
Pectatylasesuperfamilyprotein	3	3
Thioredoxin	15	15
Multicopperoxidase	23	25
Domainofunknownfunction(DUF4387)	1	3
GDSL-likeLipase/Acylyhydrolasefamily	31	31
Oxidoreductasemolybdopterinbindingdomain	9	7
shortchaindehydrogenase	243	243
Galactoseoxidase,centraldomain	5	5
CHATdomain	44	44
D-isomerspecific2-hydroxyaciddehydrogenase,NADbindingdomain	19	19
GlutathioneS-transferase,N-terminaldomain	31	31

Sulfatase-modifyingfactorenzyme1	3	3
N-terminaldomainofoxidoreductase	3	3
Alpha-kinasefamily	3	3
ATPadenylyltransferaseC-terminaldomain	5	5
Malesterilityprotein	15	19
DipeptidylpeptidaseIV(DPPIV)N-terminalregion	1	1
JAB1/Mov34/MPN/PAD-1ubiquitinprotease	1	1
Aconitasefamily(aconitatehydratase)	5	5
Glycosylhydrolasesfamily18	43	48
Endoplasmicreticulum-basedfactorforassemblyofV-ATPase	1	1
Fumarylacetoacetate(FAA)hydrolasefamily	30	30
Proteinofunknownfunction(DUF3140)	1	1
PQlooprepeat	5	5
Flavin-bindingmonooxygenase-like	67	73
Protein-tyrosinephosphatase	1	1
lactate/malatedehydrogenase,alpha/betaC-terminaldomain	1	1
FADdependentoxidoreductase	83	85
PPRrepeat	3	3
Striatinfamily	1	1
Glycerol-3-phosphateacyltransferaseC-terminalregion	1	1
Domainofunknownfunction(DUF4139)	1	1
FYVEzincfinger	1	1
PeptidasefamilyM28	7	7
Phosphoribosylglycinamidesynthetase,ATP-grasp(A)domain	2	3
N-terminaldomainofribosephosphatepyrophosphokinase	1	1
KuCterminaldomainlike	1	1
COG4transportprotein	3	3
Dihydrofolatereductase	1	1
Dynaminfamily	15	17
Beta-ketoacylsynthase,N-terminaldomain	17	17

Telomere recombination	3	3
OP Toligopeptide transporter protein	21	21
WSC domain	23	21
C-terminal region of MMR_HSR1 domain	1	1
MCMP-loop domain	5	5
Ribosomal protein L7/L12 C-terminal domain	1	1
NOG1 N-terminal helical domain	1	1
Tyrosyl-DNA phosphodiesterase	1	1
Fungal trichothecene efflux pump (TRI12)	7	9
Subunit 21 of Mediator complex	1	1
Fatty acid desaturase	13	13
Eukaryotic translation initiation factor 2 alpha subunit	1	1
Origin recognition complex (ORC) subunit 4 C-terminus	1	1
Domain of unknown function (DUF383)	1	1
Inhibitor of Apoptosis domain	1	1
Biotin-protein ligase, N-terminal	1	1
Acetyl-coenzyme A transporter 1	1	1
MOSC domain	11	11
Bromodomain	9	11
ENTH domain	3	3
Probable N6-adenine methyltransferase	1	1
CRAL/TRIO domain	5	5
Importin repeat 6	1	1
Enolase C-terminal domain-like	13	13
Protein of unknown function (DUF3638)	11	15
Importin-beta N-terminal domain	1	1
Pyridoxal-phosphate dependent enzyme	21	21
Transglutaminase-like superfamily	3	3
eIF4-gamma/eIF5/eIF2-epsilon	1	1
Glycosyl hydrolase family 32 N-terminal domain	8	9

Fes/CIP4,andEFC/F-BARhomologydomain	1	1
alpha/betahydrolasefold	150	156
Permeasefamily	5	5
Glutathione-dependentformaldehyde-activatingenzyme	19	21
CCR4-Notcomplexcomponent,Not1	1	1
Thiaminepyrophosphateenzyme,C-terminalTPPbindingdomain	3	3
Amidohydrolasefamily	35	33
Na+dependentnucleosidetransporterC-terminus	1	1
Condensationdomain	7	7
Pleckstrinhomologydomain	7	5
Clr5domain	17	17
Domainofunknownfunction(DUF3425)	41	49
Polynucleotidekinase3phosphatase	1	1
Zincfinger,C3HC4type(RINGfinger)	11	11
Molybdopterin-bindingdomainofaldehydedehydrogenase	3	3
JmjCdomain,hydroxylase	5	5
Glycerophosphoryldiesterphosphodiesterasefamily	5	5
RNApolymeraseI-specifictranscription-initiationfactor	1	1
Sec1family	1	1
Helicaseassociateddomain(HA2)	1	1
KetopantoatereductasePanE/ApbA	9	5
VAD1AnalogofStAR-relatedlipidtransferdomain	3	3
eRF1domain2	1	1
LysMdomain	11	11
NADPH-dependentFMNreductase	7	7
X-Prodipeptidyl-peptidase(S15family)	15	15
Aldo/ketoreductasefamily	69	67
Acyl-CoAdehydrogenase,N-terminaldomain	1	1
CrcB-likeprotein,CamphorResistance(CrcB)	1	1
(2R)-phospho-3-sulfolactatesynthase(ComA)	1	1

RibonucleaseIII domain	3	3
Transcription factor PAP1	1	1
Piwi domain	7	7
Sodium/calcium exchanger protein	15	17
Prenyltransferase and squalene oxidase repeat	3	3
Hexokinase	5	5
S-adenosylmethionine synthetase, C-terminal domain	1	1
AICARFT/IMPCHase bienzyme	1	1
Questin oxidase-like	3	3
Annexin	3	3
Oxidoreductase NAD-binding domain	7	9
CNH domain	1	1
NAC domain	3	3
Zinc-ribbon, C4HC2 type	1	1
Transcription factor S-II (TFIIS)	1	1
Phosphoinositide 3-kinase family, accessory domain (PIK domain)	1	1
HCO3-transporter family	3	3
Pre-PUA-like domain	1	1
Dak1 domain	9	7
Cation transport protein	11	13
Haemolysin-III related	3	3
Invertebrate-AID/APOBEC-deaminase	1	1
Rab-GTPase-TBC domain	13	13
Pyridine nucleotide-disulphide oxidoreductase	47	53
Transketolase, thiamine diphosphate binding domain	7	7
Class-II DAHP synthetase family	1	1
chorismate binding enzyme	1	1
Amidase	65	74
Protein of unknown function (DUF917)	3	3
Cytoskeletal-regulatory complex EFhand	5	5

BRO1-like domain	1	1
Vesiculovirus phosphoprotein	1	1
Histidine phosphatase superfamily (branch 1)	17	17
Possible lysine decarboxylase	3	3
PAN domain	20	20
BOP1NT (NUC169) domain	1	1
Putative nucleosome organisation protein	1	1
Pre-SET motif	1	1
PolyA polymerase head domain	1	1
Fungal N-terminal domain of STAND proteins	19	15
RWD domain	1	1
Domain of unknown function (DUF1929)	5	5
Translation initiation factor SUI1	5	5
Flavin containing amine oxidoreductase	56	56
Phosphoribosyl transferase domain	3	3
Glycosyl hydrolase family 71	5	5
10TMAcyl transferase domain found in Cas1p	1	1
Poly-adenylate binding protein, unique domain	1	1
Electron transfer flavoprotein-ubiquinone oxidoreductase, 4Fe-4S	1	1
Thioredoxin-like domain	1	1
Las1-like	1	1
mRNA capping enzyme	5	5
Arrestin (or S-antigen), N-terminal domain	3	3
Transcription factor Tfb2	1	1
DENN (AEX-3) domain	3	3
Uncharacterized conserved protein (DUF2278)	5	5
Mannosidase Ig/CBM-like domain	3	3
Dioxygenase	41	43
Hydantoinase B/oxoprolinase	3	3
Leucyl-tRNA synthetase, Domain 2	1	1

Adenylosuccinatesynthetase	5	5
SterolmethyltransferaseC-terminal	1	1
Methyltransferasedomain	196	200
tRNAsynthetaseclassIIcoredomain(G,H,P,SandT)	1	1
VariantSH3domain	3	3
PutativeGTPaseactivatingproteinforArf	9	9
EsterasePHBdepolymerase	1	1
Prion-inhibitionandpropagation	27	23
Nicotinatephosphoribosyltransferase(NAPRTase)family	1	1
TCP-1/cpn60chaperoninfamily	1	1
Phosphotransferaseenzymeefamily	47	49
Alpha-L-fucosidase	3	3
PhoD-likephosphatase	5	5
Enoyl-(Acylcarrierprotein)reductase	104	122
Maltoseacetyltransferase	3	3
Adaptorcomplexesmediumsubunitfamily	1	1
Gprotein-coupledglucosereceptorregulatingGpa2	5	5
Cupin	47	45
2OG-Fe(II)oxygenasesuperfamily	27	29
Arylsulfotransferase(ASST)	5	5
tRNAsynthetasesclassI(I,L,MandV)	1	1
RAVEprotein1Cterminal	1	1
GTPase-activatorproteinforRas-likeGTPase	3	3
Histidine-specificmethyltransferase,SAM-dependent	5	5
DNAmismatchrepairproteinMlh1C-terminus	1	1
Aflatoxinregulatoryprotein	1	1
Ceramidase	3	3
AcyclicterpeneutilisationfamilyproteinAtuA	3	3
Cupindomain	17	15
Retinalpigmentepithelialmembraneprotein	21	21

Ionchannel	5	5
Peroxidase	27	25
SETdomain	19	28
Aminomethyltransferasefolate-bindingdomain	3	3
Lethalgiantlarvae(Lgl)like,C-terminal	1	1
Sec63Brldomain	3	3
Proteasome-substrate-sizeregulator,midregion	1	1
HECT-domain(ubiquitin-transferase)	3	3
Melibiose	5	3
Sugar-bindingN-terminaldomain	3	3
PCRFdomain	1	1
Peptidasedimerisationdomain	5	5
Glycosylhydrolasefamily49N-terminalIg-likedomain	1	1
ScavengerRNAdecappingenzyme(DcpS)N-terminal	1	1
GammatubulincomplexcomponentC-terminal	1	1
RIO1family	3	3
RPN1N-terminaldomain	1	1
LrgB-likefamily	3	3
Porphobilinogendeaminase,dipyromethanecofactorbindingdomain	1	1
SRP54-typeprotein,GTPasedomain	1	1
NUDIXdomain	22	22
Metallo-beta-lactamasesuperfamily	31	31
High-temperature-induceddauer-formationprotein	1	1
Cupin-likedomain	11	11
GATAzincfinger	19	19
CyclinD1bindingdomain	1	1
Pyruvatekinase,barreldomain	1	1
AAAliddomain	3	3
DASHcomplexsubunitSpc34	1	1
Oligonucleotide/oligosaccharide-binding(OB)-fold	3	3

NACHTdomain	57	53
Commoncentraldomainoftyrosinase	29	35
Spb1C-terminaldomain	1	1
tRNAsynthetasesclassI(M)	1	1
FADlinkedoxidases,C-terminaldomain	11	13
Proteinofunknownfunction(DUF3723)	13	15
Ca ²⁺ insensitiveEFhand	1	1
G-patchdomain	3	3
GlutathioneS-transferaseN-terminaldomain	3	3
Aldolase/RraA	7	7
Bacterialtandemrepeatdomain1	1	1
SPRYdomain	1	1
AlphagalactosidaseA	3	3
Oxysterol-bindingprotein	5	5
Phosphoenolpyruvatecarboxykinase	1	1
Glycosylhydrolasefamily67middledomain	5	5
Proteintyrosinephosphatase-likeprotein,PTPLA	3	3
Tti2family	1	1
BacterialsignallingproteinNterminalrepeat	15	11
CoA-transferasefamilyIII	15	15
UvrD-likehelicaseC-terminaldomain	1	1
Domainofunknownfunction(DUF2014)	1	1
STEliketranscriptionfactor	1	1
Glycosylhydrolasefamily3Nterminaldomain	7	7
Dehydratasefamily	3	3
Pyruvatephosphatedikinase,AMP/ATP-bindingdomain	1	1
Domainofunknownfunction(DUF4743)	1	1
Calpainfamilycysteineprotease	25	29
Poly(A)polymerasecentraldomain	1	1
Zinc-fingerofnitricoxidesynthase-interactingprotein	1	1

Fungalysinmetallopeptidase(M36)	1	1
Anaerobicribonucleoside-triphosphatereductase	1	1
Transketolase,pyrimidinebindingdomain	3	3
Glycosyltransferasefamily28N-terminaldomain	25	23
Bacterialtransferasehexapeptide(sixrepeats)	3	3
Tannaseandferuloylsterase	23	25
Alpha-L-rhamnosidaseN-terminaldomain	1	1
Domainofunknownfunction(DUF427)	1	1
Alphaamylase,catalyticdomain	11	7
Domainofunknownfunction(DUF4470)	3	3
FADbindingdomainofDNAphotolyase	1	1
XPC-bindingdomain	1	1
ZincfingerC-x8-C-x5-C-x3-Htype(andsimilar)	9	9
HelicaseC-terminaldomain	1	1
BRE1E3ubiquitinligase	1	1
Sulfotransferasedomain	27	23
Molybdopterinoxidoreductase	3	3
Mannosyltransferaseputative	5	5
MetallopeptidasefamilyM24	7	7
RadicalSAMsuperfamily	1	1
Glycosylhydrolasefamily30betasandwichdomain	1	1
NB-ARCdomain	9	7
fungalsTANDN-terminalGoodbyedomain	11	11
FG-GAP-likerepeat	3	3
Uracilphosphoribosyltransferase	1	1
Zn-fingerinRanbindingproteinandothers	1	1
Cytochromeb5-likeHeme/Steroidbindingdomain	11	11
Xrn1helicaldomain	1	1
Domainofunknownfunction(DUF4111)	1	1
Domainofunknownfunction(DUF382)	1	1

Arb2domain	1	1
Membranemagnesiumtransporter	1	1
SLA1homologydomain1,SHD1	1	1
SnoaL-likepolyketidecyclase	13	13
Glycosylhydrolasesfamily35	5	5
Oxidoreductasefamily,C-terminalalpha/betadomain	3	3
EamA-liketransporterfamily	1	1
Dyneinassociatedprotein	1	1
Animalhaemperoxidase	7	9
Glycosylhydrolasefamily115	3	3
Prp19/Pso4-like	1	1
Thiaminepyrophosphateenzyme,N-terminalTPPbindingdomain	23	23
GlyoxaloxidaseN-terminus	1	1
Eukaryotic-typecarbonicanhydrase	5	5
DomainofUnknownFunction(DUF913)	1	1
Domainofunknownfunction(DUF1771)	1	1
Insulinase(PeptidasefamilyM16)	3	1
TypeI3-dehydroquinase	1	1
Shikimatedehydrogenasesubstratebindingdomain	1	1
Phospholipid-translocatingP-typeATPaseC-terminal	1	1
Nsp1-likeC-terminalregion	1	1
14-3-3protein	7	7
GETcomplexsubunitGET2	1	1
Transmembraneaminoacidtransporterprotein	31	29
Glycosylhydrolasesfamily15	1	1
Proteinofunknownfunction(DUF974)	1	1
IBRdomain,ahalfRING-fingerdomain	11	11
Alanineracemase,N-terminaldomain	3	1
Aspartylprotease	1	1
ATP-graspN-terminaldomain	1	1

GDP-mannose4,6dehydratase	5	3
Proteasomesubunit	7	7
Domainofunknownfunction(DUF1993)	5	5
Aminoacidkinasefamily	3	3
UbiAprenyltransferasefamily	3	3
Serineaminopeptidase,S33	23	23
Serinedehydratasealphachain	1	1
TaurinecatabolismdioxygenaseTauD,TfdAfamily	15	16
PeptidasefamilyM13	3	3
CVNHdomain	1	1
Arrestin(orS-antigen),C-terminaldomain	7	7
MCMAAA-liddomain	1	1
ScaffoldproteinNfu/NifUNterminal	1	0
Dihydrouridinesynthase(Dus)	5	5
Anaphase-promotingcomplexsubunit4WD40domain	1	1
ErgosterolbiosynthesisERG4/ERG24family	9	9
SAMdomain(Sterilealphamotif)	1	1
Sulfatase	23	21
Proteinofunknownfunction(DUF933)	1	1
Bacterialalpha-L-rhamnosidaseC-terminaldomain	1	1
CentromerekinetochorecomponentCENP-Thistonefold	5	5
Fusaricacidresistanceprotein-like	1	1
6-phosphogluconatedehydrogenase,C-terminaldomain	3	3
PULdomain	1	1
GTPcyclohydrolaseNterminal	1	1
Enoyl-CoAhydratase/isomerase	17	19
WWdomain	9	9
Uncharacterizedalpha/betahydrolasedomain(DUF2235)	19	17
ATPsynthasesubunitC	1	1
Ribonuclease2-5A	1	1

GlucosidaseIIbetasubunit-likeprotein	1	1
Proteinofunknownfunction(DUF3445)	3	5
VHSdomain	3	3
Ribosomebiogenesisprotein,C-terminal	1	1
RanBP1domain	3	3
Ig-like domainfromnexttoBRCA1gene	1	1
MannitoldehydrogenaseC-terminaldomain	1	1
Eukaryoticaspartylprotease	30	30
Asp/Glu/Hydantoinracemase	11	9
Peroxidase,family2	13	11
NAD(P)-bindingRossmann-like domain	21	27
tRNAsynthetasesclassII(A)	1	1
Glycosidehydrolasefamily2C-terminaldomain5	1	1
CoatmerWDassociatedregion	1	1
PLU-1-likeprotein	1	1
Proteinofunknownfunction(DUF3292)	1	1
Candidaagglutinin-like(ALS)	3	1
NAD(P)H-binding	46	49
KetopantoatereductasePanE/ApbACterminal	5	3
Glycosylhydrolasefamily79C-terminalbetadomain	5	5
NYNdomain	5	5
Cid1familypolyApolymerase	1	1
Proteinofunknownfunction(DUF1593)	9	11
HomeoboxKNdomain	11	11
Pectinesterase	8	8
EVE domain	1	1
MoaFC-terminaldomain	1	1
NDT80/PhoGlikeDNA-bindingfamily	7	7
PeptidaseA4family	5	5
ATP-graspdomain	1	1

Pyridoxal-dependentdecarboxylase,pyridoxalbindingdomain	3	3
DSHCT(NUC185)domain	1	1
Iron/zincpurpleacidphosphatase-likeproteinC	1	1
Glycosyltransferasefamilygroup2	5	7
Glycosylhydrolasefamily59	1	1
TransportproteinAvl9	1	1
Domainofunknownfunction(DUF4419)	5	5
Ninonebinding(NOB1)Zn-ribbonlike	1	1
Cyclophilintypepeptidyl-prolylcis-transisomerase/CLD	9	9
ACTdomain	1	1
lactate/malatedehydrogenase,NADbindingdomain	3	3
Glycosyltransferasesgroup1	9	9
NADdependentepimerase/dehydratasefamily	58	60
Amidohydrolase	57	53
3-hydroxyacyl-CoAdehydrogenase,NADbindingdomain	3	5
ThreoninesynthaseNterminus	1	1
Dienelactonehydrolasefamily	27	27
RAMsignallingpathwayprotein	1	1
MembraneboundO-acyltransferasefamily	3	1
DHHA2domain	1	1
hATfamilyC-terminaldimerisationregion	94	496
Glycosylhydrolasesfamily28	21	19
Metallo-peptidasefamilyM12	1	1
FattyacidsynthasesubunitalphaAcylcarrierdomain	1	1
SRF-typetranscriptionfactor(DNA-bindinganddimerisationdomain)	9	15
Thiolase,C-terminaldomain	1	1
CoenzymeAtransferase	3	1
THOcomplexsubunit2N-terminus	1	1
EZH2N-terminaldomain	3	3
Seedmaturationprotein	1	1

Cationeffluxfamily	9	9
X-Prodipeptidyl-peptidaseC-terminalnon-catalyticdomain	3	3
Tetrahydrofolatedehydrogenase/cyclohydrolase,catalyticdomain	1	1
GlycinecleavagesystemP-protein	1	1
Pyoverdine/dityrosinebiosynthesisprotein	1	1
Glycosyltransferasesugar-bindingregioncontainingDXDmotif	5	5
Tyrosinephosphatasefamily	3	3
mRNACappingenzyme,catalyticdomain	1	1
Telomeraseribonucleoproteincomplex-RNAbindingdomain	1	1
S-adenosyl-L-homocysteinehydrolase,NADbindingdomain	1	1
RibonucleaseT2family	3	3
EPSPsynthase(3-phosphoshikimate1-carboxyvinyltransferase)	1	1
Carbohydrateesterase2N-terminal	1	1
Glutamate/Leucine/Phenylalanine/Valinedehydrogenase	3	5
ERCC3/RAD25/XPBC-terminalhelicase	1	1
HNHendonuclease	25	31
GLEYAdomain	5	7
RecQzinc-binding	3	0
LicDfamily	1	1
ANTHdomain	1	1
TAP-likeprotein	3	3
Frequencyclockprotein	17	17
Proteinofunknownfunction(DUF4246)	11	9
SIR2-likedomain	1	1
Pyridoxamine5'-phosphateoxidase	7	7
haloaciddehalogenase-likehydrolase	3	3
Acyltransferasedomain	3	1
Poly(ADP-ribose)polymerase,regulatorydomain	3	3
Glycosylhydrolasesfamily6	1	1
NuclearporeproteinNUP188C-terminaldomain	1	1

Indole-3-glycerolphosphatesynthase	1	1
Apg6BARAdomain	1	1
Integrasecoredomain	1	1
Glycosylhydrolasefamily76	13	13
PAP2superfamily	15	13
Polyketidesynthasedehydratase	1	3
OTT_1508-likedeaminase	25	25
FAD-bindingdomain	3	7
Iron-containingalcoholdehydrogenase	19	21
SesBdomainonfungaldeath-pathwayprotein	1	1
Dihydrodipicolinatesynthetasefamily	13	11
Glycosylhydrolasefamily65,N-terminaldomain	5	5
Uncharacterisedproteinfamily(UPF0183)	1	1
Formate/nitritetransporter	3	3
Chromatetransporter	5	5
Phagelysozyme	3	5
Caleosinrelatedprotein	5	5
Glycosylhydrolasefamily1	35	35
RasGEFdomain	1	1
Putativeserinedehydratasedomain	1	1
Proteinofunknownfunction(DUF3659)	5	5
Squalene-hopenecyclaseN-terminaldomain	1	1
MmgE/PrpDC-terminaldomain	1	1
tRNAsynthetasesclassI(R)	1	1
Mis12-Mtw1proteinfamily	13	13
Pirin	3	3
Orsellinicacid/F9775biosynthesisclusterproteinD	33	79
Zinccarboxypeptidase	11	11
SRR1	5	5
Clathrinadaptorcomplexsmallchain	1	1

SHNi-TPR	1	1
Zinc-bindingdomain	1	1
Transmembraneproteins14C	3	3
3-betahydroxysteroiddehydrogenase/isomerasefamily	11	9
Secretorylipase	7	7
Proteinofunknownfunction(DUF4238)	3	5
SMP-30/Gluconolactonase/LRE-likeregion	11	11
BTB/POZdomain	40	38
Cyclin-dependentkinaseregulatorysubunit	1	1
CPSFAsubunitregion	3	3
Phytanoyl-CoAdioxygenase(PhyH)	20	20
Domainofunknownfunction(DUF4345)	3	3
Kinesinmotordomain	5	5
Cysteine-richTMmodulestresstolerance	1	1
Proteinofunknownfunction(DUF3759)	1	1
Amino-transferaseclassIV	13	15
Alcoholacetyltransferase	11	11
YCII-relateddomain	5	5
SAMdependentcarboxylmethyltransferase	5	5
Aromaticaminoacidlyase	3	3
Lipocalin-likedomain	1	1
2EXRfamily	46	49
EpoxidehydrolaseNterminus	11	13
Isoprenylcysteinocarboxylmethyltransferase(ICMT)family	7	5
Majorintrinsicprotein	11	11
Nucleotide-diphospho-sugartransferase	3	3
Acetyltransferase(GNAT)family	45	43
IncreasedlossofmitochondrialDNAprotein1	1	1
EthDdomain	13	15
ChrRCupin-likedomain	5	5

Lactonase,7-bladedbeta-propeller	7	9
MycotoxinbiosynthesisproteinUstYa	3	3
Polyketidecyclase/dehydraseandlipidtransport	8	10
Indoleamine2,3-dioxygenase	7	7
NUBPLiron-transferP-loopNTPase	1	1
Basicregionleucinezipper	7	11
Proteintyrosineandserine/threoninekinase	3	1
Proteinofunknownfunction(DUF3455)	7	11
Ubiquinol-cytochromeCreductasecomplex14kDsubunit	1	1
Hsp20/alphacrystallinfamily	7	9
Up-regulatedDuringSeptation	13	13
Lipase(class3)	5	5
Glycosylhydrolasesfamily16	49	61
Uncharacterizedproteinconservedinbacteria(DUF2263)	5	5
Aldose1-epimerase	1	1
CorA-likeMg2+transporterprotein	9	5
GDSL-likeLipase/Acylhydrolase	39	39
Pro-kumamolisin,activationdomain	5	5
Cytidineanddeoxycytidylatedeaminasezinc-bindingregion	1	1
Necrosisinducingprotein(NPP1)	5	7
Proteinofunknownfunction(DUF2439)	1	1
EndoribonucleaseL-PSP	21	21
BRCTdomain,aBRCA1C-terminusdomain	1	1
FungalTransformingacidicoiled-coil(TACC)proteins	1	1
Yip1domain	1	1
Bacterialphospho-glucoseisomeraseC-terminalSISdomain	1	1
Acetyltransferase(GNAT)domain	27	27
Metal-independentalpha-mannosidase(GH125)	3	3
Transferasefamily	24	24
alpha-L-rhamnosidase	41	41

Haem-containingdehydratase	7	7
F-boxdomain	21	23
Iontransportprotein	1	1
S1/P1Nuclease	1	1
Glycosyltransferasefamily8	9	9
O-methyltransferasedomain	21	27
GDP/GTPexchange factorSec2p	1	1
3-hydroxyacyl-CoAdehydrogenase,C-terminaldomain	1	1
Trichodienesynthase(TRI5)	1	1
Proteinofunknownfunction(DUF1349)	3	3
Phosphoglyceratekinase	1	1
HpcH/HpaIaldolase/citratelasefamily	19	15
Serinecarboxypeptidase	24	24
Histidinoldehydrogenase	1	1
TctoxincomplexTcAC-terminalTcB-bindingdomain	1	1
galactosyltransferaseGMA12/MNN10family	5	5
Sir2family	3	3
YetA-likeprotein	1	1
Eukaryoticproteinofunknownfunction(DUF829)	5	5
OrganicsolutetransporterOstalpha	3	3
F-box-like	31	31
Prolinedehydrogenase	3	3
Predictedmembraneprotein(DUF2306)	5	5
Phosphoenolpyruvatephosphomutase	5	5
Porphyromonas-typepeptidyl-argininedeiminase	3	3
Proteinofunknownfunction(DUF2456)	1	1
Ecdysteroidkinase-likefamily	11	11
KinetochoreSim4complexsubunitFTA2	10	11
Lysinemethyltransferase	3	3
Glycosyltransferaselikefamily2	5	5

StressresponsiveA/BBarrelDomain	5	5
homogentisate1,2-dioxygenase	3	3
Cys/MetmetabolismPLP-dependentenzyme	19	19
Terpenesynthasefamily2,C-terminalmetalbinding	11	13
Fungalproteinkinase	5	5
Cupinsuperfamily(DUF985)	3	3
Dihydroorotatedehydrogenase	1	1
DomainofUnknownFunction(DUF1907)	3	3
HDdomain	9	11
Haloaciddehalogenase-likehydrolase	15	15
Glycosidehydrolase131catalyticN-terminaldomain	1	1
Thioesterase-likesuperfamily	15	15
Glycosylhydrolasesfamily39	3	3
MeioticcellcortexC-terminalpleckstrinhomology	1	1
GlycosylHydrolaseFamily88	3	5
Lysophospholipasecatalyticdomain	5	5
Domainofunknownfunction(DUF1989)	3	1
Autophagocytosisassociatedprotein,active-sitedomain	5	4
SMI1/KNR4family(SUKH-1)	3	3
ADP-ribosylglycohydrolase	7	7
EsteraseFrsA-like	5	3
bZIPtranscriptionfactor	27	30
Mating-typeproteinMATalpha1HMG-box	1	1
Domainofunknownfunction(DUF1338)	9	9
Matingtypeprotein1-1-2ofunknownfunction	1	1
Proteinofunknownfunction(DUF1479)	11	9
ATPsynthasesubunitD	1	1
HMG(highmobilitygroup)box	5	5
GDA1/CD39(nucleosidephosphatase)family	1	1
ER-GolgitraffickingTRAPPIcomplex85kDasubunit	1	1

XPGdomaincontaining	1	1
Ubiquitin3bindingproteinBut2C-terminaldomain	5	5
CytochromecoxidasesubunitVIa	1	1
Phenazinebiosynthesis-likeprotein	7	7
Glycosylhydrolasefamily12	11	11
Helix-loop-helixDNA-bindingdomain	15	15
Sodium:solutesymporterfamily	3	3
Rhamnogalacturonanlyasesbeta-sheetdomain	1	1
Alginatelyase	5	5
Hypotheticalmethyltransferase	1	1
PredictedAdoMet-dependentmethyltransferase	1	1
pfkBfamilycarbohydratekinase	3	3
ChorismatemutasetypeII	1	1
Fungalproteinofunknownfunction(DUF1752)	19	19
Rhodanese-likedomain	5	5
SodiumBileacidsymporterfamily	5	5
Naturalresistance-associatedmacrophageprotein	5	5
NUDEprotein,C-terminalconservedregion	1	1
Dynactinp62family	1	1
Bacterialproteinofunknownfunction(DUF924)	3	3
TranscriptionfactorIIA,alpha/betasubunit	1	1
Hypoxiainducedproteinconservedregion	3	3
DNApolymeraseLigase(LigD)	1	1
UDP-glucuronosylandUDP-glucosyltransferase	7	7
Ankyrinrepeat	245	223
Trypsin	7	7
Proteinofunknownfunction(DUF3632)	5	5
Pyridoxal-dependentdecarboxylaseconserveddomain	11	11
Forkheaddomain	1	1
CoenzymeQ(ubiquinone)biosynthesisproteinCoq4	1	1

Transaldolase/Fructose-6-phosphatealdolase	7	7
Proteinofunknownfunction(DUF1688)	1	1
Acetoacetatedecarboxylase(ADC)	8	8
DJ-1/PfpIfamily	14	14
SaccharopinedehydrogenaseNADPbindingdomain	5	5
Astacin(PeptidasefamilyM12A)	5	7
Caspasedomain	11	11
Rasfamily	21	21
Bacteriorhodopsin-likeprotein	15	19
Fungalfruitbodylectin	1	1
Proteinofunknownfunction(DUF3237)	11	11
CFEMdomain	23	25
RibDC-terminaldomain	1	1
Antibioticbiosynthesismonooxygenase	7	7
Glycosyltransferasefamily90	7	7
Peroxisomalbiogenesisfactor11(PEX11)	3	3
Alpha/betahydrolasedomain	1	0
Thioesterasesuperfamily	9	7
MAPEGfamily	7	5
Tryptophandimethylallyltransferase	7	5
Phosphoesterasefamily	3	1
PP-loopfamily	1	1
Pex2/Pex12aminoterminalregion	1	1
vonWillebrandfactortypeAdomain	3	7
Serinehydrolase(FSH1)	3	3
LITAF-likezincribbondomain	11	11
Domainofunknownfunction(DUF1772)	3	3
Proteinofunknownfunction(DUF2985)	3	3
WD40-likeBetaPropellerRepeat	1	1
Ferritin-likedomain	3	5

Familyofunknownfunction(DUF5519)	3	3
ClassIIAldolaseandAdducinN-terminaldomain	5	5
HPC2andubicleindomain	1	1
Golgi phosphoprotein3(GPP34)	1	1
Zincfingerprotein	1	1
CASC3/BarentszeIF4AIIIbinding	1	1
Familyofunknownfunction(DUF6060)	2	1
Proteinofunknownfunction(DUF3176)	9	9
Ribose/GalactoseIsomerase	3	3
FtsJ-likemethyltransferase	5	5
Isochorismatasefamily	11	11
MCRAfamily	1	3
PeptidasefamilyM3	3	3
Purinenucleosidepermease(NUP)	1	1
Cysteine-richsecretoryproteinfamily	15	19
FAR-17a/AIG1-likeprotein	1	1
Putativecyclase	11	11
Domainofunknownfunction(DUF4267)	11	9
Telomeric single stranded DNA binding POT1/CDC13	1	1
Ribosomal protein S14p/S29e	3	3
Beta-eliminatinglyase	1	1
Egh16-likevirulencefactor	9	7
TM2domain	1	3
Glycosyltransferasefamily64domain	3	3
hTAFII28-likeprotein conserved region	1	1
GTPcyclohydrolaseI	1	1
Transientreceptorpotential(TRP)ionchannel	1	1
Glycine-richdomain-containingprotein-like	1	1
RING-variantdomain	1	1
Alpha-L-arabinofuranosidaseC-terminaldomain	5	5

Stc1domain	1	1
Rhomboidfamily	3	3
Luciferase-likemonooxygenase	5	5
Ham1family	1	1
ProteinHRI1	1	1
ECL1/2/3zincbindingproteins	5	7
K+potassiumtransporter	5	3
Arginosuccinatesynthase	3	3
Choline/ethanolaminekinase	3	3
Flavoprotein	7	7
HrpE/YscL/FliHandV-typeATPasesubunitE	1	1
Vacuolarproteinorting-associatedprotein62	1	1
Transposase	73	104
U3-containing90Spre-ribosomalcomplexsubunit	1	1
Cryptococcalmannosyltransferase1	9	9
Pathogeneffector	3	3
Las17-bindingproteinactinregulator	5	7
Competence-damagedprotein	1	1
2'-5'RNAligasesuperfamily	1	1
Flavinreductaselikedomain	5	5
Meioticallyup-regulatedgenefamily	5	13
Sybindin-likefamily	3	3
Phosphatetransporterfamily	5	5
LanthioninesynthetaseC-likeprotein	1	1
Matrixin	1	1
Phosphatidylglycerollysyltransferase,C-terminal	1	1
Glutamineamidotransferasesclass-II	1	1
Hypotheticalglycosylhydrolase6	3	3
RQCdomain	1	1
GINScomplexprotein	3	3

Gamma-glutamylcyclotransferase,AIG2-like	6	6
Citrate synthase,C-terminal domain	1	1
Glycosylhydrolase catalytic core	3	3
HicA toxin of bacterial toxin-antitoxin, Family of unknown function(DUF5695)	1	1
Spt20 family	3	3
RNA dependent RNA polymerase	1	1
AFG1-like ATPase	9	11
Lipoxygenase	1	1
Sodium/hydrogen exchanger family	3	3
Activator of mitotic machinery Cdc14 phosphatase activation C-term	9	15
RPA43 OB domain in RNA Pol II	1	1
Heme oxygenase	1	1
Right handed beta helix region	1	1
Putative amidoligase enzyme	3	3
Tuberculosis necrotizing toxin	5	5
Acyltransferase family	1	1
Ion channel regulatory protein UNC-93	3	3
Domain of unknown function(DUF4385)	3	3
Alpha-galactosyl-binding fung allectin	1	1
Nucleoporin autopeptidase	1	1
Spherulation-specific family4	1	1
Glycoside-hydrolase family GH114	3	3
Domain of unknown function(DUF5703)	3	3
Protein-arginine deiminase(PAD)	1	1
Exonuclease	9	9
Peptidase family S41	15	15
Reactive mitochondrial oxygen species modulator1	1	1
Beta-1,3-glucanase	1	1
TENA/THI-4/PQQC family	13	17
	1	1

C-terminaldomainof1-Cysperoxidoredoxin	1	1
Glycosylhydrolasefamily53	3	3
Deuterolysinmetalloprotease(M35)family	1	1
Glutaredoxin	3	3
Bacterialextracellularsolute-bindingprotein	3	5
G-proteinalphasubunit	7	7
Arrestin_Nterminallike	3	3
Pregnancy-associatedplasma protein-A	3	3
ExpansinC-terminaldomain	1	1
CysteinedioxygenasetypeI	1	1
Scytalonedehydratase	1	3
Hsp70protein	19	19
Phenolicaciddecarboxylase(PAD)	1	1
Glucose-repressibleproteinGrg1	3	3
Mpv17/PMP22family	7	7
3-octaprenyl-4-hydroxybenzoatecarboxy-lyase	9	9
Cytochromec	15	15
Fic/DOCfamily	9	9
CopperfistDNA bindingdomain	1	1
VITfamily	1	1
EXPERA(EXPandedEBPsuperfamily)	5	5
Carboxymuconolactonedecarboxylasefamily	11	11
Putativelumazine-binding	3	1
Glycosyltransferasefamily2	33	29
Erg28likeprotein	1	1
Ulp1proteasefamily,C-terminalcatalyticdomain	11	15
Domainofunknownfunction(DUF4451)	5	5
Translocon-associatedprotein(TRAP),alphasubunit	1	1
Est1DNA/RNA bindingdomain	5	13
Tubulin-tyrosineligasefamily	3	3

Creatinase/ProlidaseN-terminaldomain	1	1
HeterokaryonincompatibilityproteinHet-C	3	3
Thiolase-likeproteintype1additionalC-terminaldomain	1	1
50Sribosome-bindingGTPase	5	5
Proteinofunknownfunction(DUF3533)	7	7
Putativeesterase	5	5
Uncharacterizedproteinconservedinbacteria(DUF2264)	1	1
Carbohydratebindingdomain	1	3
Beta-L-arabinofuranosidase,GH127	5	5
Fungalcellulosebindingdomain	3	3
Xyloseisomerase-likeTIMbarrel	5	9
D-arabinono-1,4-lactoneoxidase	1	1
Alternativeoxidase	1	1
PHPdomain	1	1
Erv1/Alrfamily	1	1
Familyofunknownfunction(DUF6055)	1	1
Hydroxymethylglutaryl-coenzymeAreductase	7	15
Glycosyltransferasefamily17	3	3
SNF5/SMARCB1/INI1	3	3
Phosphatidylserinedecarboxylase	7	11
NMT1-likefamily	1	1
PKDdomain	1	1
Caulimovirusviroplasmin	1	1
Proteinofunknownfunction(DUF2722)	3	1
Chromo(CHRromatinOrganisationMOfifier)domain	25	29
StageIIsporulationproteinE(SpoIIE)	1	1
Reticulon	9	7
C2H2typezinc-finger(2copies)	5	5
NuclearfragileXmentalretardation-interactingprotein1(NUFIP1)	1	1
Nuclearporecomplexscaffold,nucleoporins186/192/205	3	1

Zinc-finger	3	5
Lipopolysaccharidekinase(Kdo/WaaP)family	3	3
CyanatelyaseC-terminaldomain	1	1
Carbonicanhydrase	7	7
Cerato-platanin	1	1
Ctrcoppertransporterfamily	5	5
UV-endonucleaseUvdE	1	1
Innermembranecomponentdomain	1	1
gag-polypeptideofLTRcopia-type	5	3
Linalooldehydratase/isomerase	5	5
Proteinofunknownfunction(DUF1749)	1	1
AAAATPasedomain	3	3
DomainfoundinDishevelled,Egl-10,andPleckstrin(DEP)	1	1
Shortcoiled-coilprotein	5	7
Aminotransferaseclass-V	7	7
Septin	5	5
Putativeoxalocrotonatetautomeraseenzyme	1	1
SlimemoldcyclicAMPpreceptor	5	5
Histidinephosphatasesuperfamily(branch2)	9	11
Domainofunknownfunction(DUF2431)	1	1
Damage-controlphosphataseARMT1-likedomain	1	1
Anhydro-N-acetylmuramicacidkinase	1	1
Thiamine-bindingprotein	1	3
NADHubiquinoneoxidoreductase,20Kdsubunit	1	1
Calcium-activatedchloridechannel	3	3
PDZ-likedomain	3	0
T5orf172domain	11	11
HemerythrinHHEcationbindingdomain	7	7
CentromereproteinScm3	1	1
Proteinofunknownfunction(DUF3807)	1	1

Vacuolartorting38andautophagy-relatedsubunit14	1	1
Conservedhypotheticalprotein(DUF2461)	3	3
FAM32A	1	1
PescadilloN-terminus	1	1
Proteinofunknownfunction(DUF659)	5	17
CentromereDNA-bindingproteincomplexCBF3subunit,domain2	3	10
BRCA1CTerminus(BRCT)domain	1	1
Wingedhelix-turnhelix	1	1
Adenosinedeaminase	5	5
CHAPdomain	1	3
AdoMetdependentprolinedi-methyltransferase	3	1
Berberineandberberinlike	1	1
Neuraminidase-likedomain	1	1
7transmembranereceptor(Secretinfamily)	3	3
WLMdomain	3	3
PutativeFMN-bindingdomain	5	3
WGRdomain	1	1
Glycosylhydrolasesfamily11	1	1
ProkaryoticphospholipaseA2	3	3
HSF-typeDNA-binding	7	7
Nineteencomplex-relatedprotein2	1	1
LSMdomain	13	12
Homeodomain	5	5
ZIPZintransporter	3	3
Bestrophin,RFP-TM,chloridechannel	5	7
SurvivalproteinSurE	5	5
PSP1C-terminalconservedregion	1	0
MYNDfinger	11	56
Erythromycinesterase	3	6
Domainofunknownfunction(DUF1996)	3	3

Nis1family	3	3
Copperamineoxidase,N2domain	1	1
PhospholipaseDActivesitemotif	1	1
Ringfingerdomain	13	11
Alpha-acetolactatedecarboxylase	3	0
Eukaryoticeelongationfactor5Ahypusine,DNA-bindingOBfold	1	1
Domainofunknownfunction(DUF4939)	1	0
Proteinofunknownfunction(DUF3429)	1	1
ER-boundoxygenasempaB/B'/Rubberoxygenase,catalyticdomain	5	5
L-asparaginaseII	1	5
PASfold	1	1
CationtransportATPase(P-type)	1	0
Reversetranscriptase-like	1	3
FAR1DNA-bindingdomain	1	0
NAT,N-acetyltransferase,ofN-acetylglutamatesynthase	1	1
Proteinofunknownfunction(DUF3645)	1	0
PEP-utilisingenzyme,PEP-bindingdomain	1	0
Serineincorporator(Serinc)	1	1
SUKH-4immunityprotein	1	3
Cyclin,C-terminaldomain	1	0
TFIIEalphasubunit	1	1
Nuclearcap-bindingproteinsubunit3	1	1
SNAREdomain	1	1
RING-H2zincfingerdomain	3	3
CASPCterminal	1	1
Fibrillarin	1	1
mRNACleavageandpolyadenylationfactorCLP1P-loop	1	1
DASHcomplexsubunitDad1	1	1
MitochondrialATPsynthaseepsilonchain	1	1
Mak10subunit,NatCN(alpha)-terminalacetyltransferase	1	1

Skp1family,tetramerisationdomain	1	1
V-typeATPase116kDasubunitfamily	1	1
ARP2/3complex16kDasubunit(p16-Arc)	1	1
Sds3-like	1	1
Proteinofunknownfunction(DUF1757)	1	1
Mechanosensitiveionchannel	1	1
Proteinofunknownfunction(DUF3128)	1	1
RibosomalL15	1	1
Complex1protein(LYRfamily)	5	5
Vps53-like,N-terminal	1	1
Dyneinlightchaintype1	1	1
Domainofunknownfunction(DUF1708)	1	1
FirstLongindomainofINTU,CCZ1andHPS4	1	1
Proteinphosphatase2C	1	1
Putativetransmembranefamily234	1	1
RegioninClathrinandVPS	1	1
Proteinofunknownfunction(DUF2462)	1	1
Coatomerepsilonsubunit	1	1
Proteinofunknownfunction(DUF1365)	1	1
ARID/BRIGHTDNAbindingdomain	3	3
SUR7/PalIfamily	7	7
MitochondrialbiogenesisAIM24	3	3
Rad52/22familydouble-strandbreakrepairprotein	1	1
ORMDLfamily	1	1
Frag1/DRAM/Sfk1family	1	1
tRNAsynthetasesclassI(WandY)	5	5
Tim10/DDPfamilyzincfinger	1	1
CUEdomain	1	1
PPRrepeatfamily	1	1
ALG6,ALG8glycosyltransferasefamily	1	1

Sin3associatedpolypeptidp18(SAP18)	1	1
Fcf2pre-rRNAprocessing	1	1
Histone-liketranscriptionfactor(CBF/NF-Y)andarchaealhistone	5	5
ExocystcomplexsubunitSec15-like	1	1
RNArecognitionmotif2	1	1
Sad1/UNC-likeC-terminal	1	1
PutativezincfingerinN-recognin(UBRbox)	1	1
KinetochorecomplexFta4ofSim4subunit,orCENP-50	1	1
Rftprotein	1	1
FungalpheromonematingfactorSTE2GPCR	1	1
N-acetylglucosaminyltransferasecomponent(Gpi1)	1	1
Proteinofunknownfunction(DUF1275)	3	1
WH1domain	1	1
RibosomalproteinL37e	1	1
Membranetransportprotein	3	3
RaptorN-terminalCASPaselikedomain	1	1
ABC1atypicalkinase-likedomain	1	1
MOZ/SASfamily	1	1
CytochromecoxidaseassemblyproteinPET191	1	1
Pal1cellmorphologyprotein	1	1
TranscriptioninitiationfactorTFIIDsubunitA	1	1
N-terminaldomainofCBF1interactingco-repressorCIR	1	1
Iron-sulphurclusterbiosynthesis	1	1
NucleoporinproteinNdc1-Nup	1	1
Gamma-glutamyltranspeptidase	3	3
TranscriptionfactorTfb4	1	1
Anaphase-promotingcomplex,subunit10(APC10)	1	1
linkerhistoneH1andH5family	1	1
D123	1	1
Proteinofunknownfunction(DUF3716)	1	17

ChromatinassociatedproteinKTI12	1	1
Uncharacterisedproteinfamily,YAP/Alf4/glomulin	1	1
Sterylacetylhydrolase	1	1
Sedlin,N-terminalconservedregion	3	3
PrpFprotein	1	1
CENP-SassociatingCentromereproteinX	1	1
Mitoticcheckpointregulator,MAD2B-interacting	1	1
S25ribosomalprotein	1	1
Macrophagemigrationinhibitoryfactor(MIF)	1	1
Proteinofunknownfunction(DUF2420)	1	1
Myotubularin-likephosphatasedomain	1	1
Der1-likefamily	3	3
TruBfamilypseudouridylatesynthase(Nterminaldomain)	1	1
RF-1domain	1	1
Urm1(Ubiquitinrelatedmodifier)	1	1
CSLzincfinger	1	1
CutCfamily	1	1
Alkalinephosphatase	1	1
Spt4/RpoE2zincfinger	1	1
Frataxin-likedomain	1	1
Chitinsynthaseexportchaperone	1	1
KAPfamilyP-loopdomain	1	1
ConservedhypotheticalATPbindingprotein	1	1
Rpp14/Pop5family	1	1
RibosomalL27proteinfamily	1	1
TPR/MLP1/MLP2-likeprotein	1	1
DUF218domain	3	3
HistonechaperonedomainCHZ	1	1
Cyclin	43	44
Telomerepeatbindingfactor(TRF)	1	1

UncharacterizedproteinfamilyUPF0029	1	1
Eukaryoticproteinofunknownfunction(DUF866)	1	1
Innercentromereprotein,ARKbindingregion	1	1
TranscriptioninitiationfactorIID,18kDsubunit	3	3
Leucinecarboxylmethyltransferase	1	1
Beta-glucosidase(SUNfamily)	3	3
MitochondrialK ⁺ -H ⁺ exchange-related	1	1
Domainofunknownfunction(DUF4149)	1	1
SOR/SNZfamily	1	1
Phosphatidylinositol-4-phosphate5-Kinase	1	1
Nucleosidediphosphatekinase	1	1
MitochondrialimportproteinPam17	1	1
RibosomebiogenesisproteinSLX9	1	1
SMODSandSLOG-associating2TMeffectordomain	1	1
zinc-RINGfingerdomain	1	1
Spo7-likeprotein	1	1
Inositolmonophosphatasefamily	3	3
DehydroquinaseclassII	1	1
Myb/SANT-likeDNA-bindingdomain	1	1
U4/U6.U5smallnuclearribonucleoproteins	1	1
Acyl-coenzymeA:6-aminopenicillanicacidacyl-transferase	1	1
Whi5like	1	1
Thi4family	1	1
MitochondrialF1-F0ATPsynthasesubunitFoffungi	1	1
ETCcomplexIsubunitconservedregion	1	1
RibosomalproteinS19e	1	1
Universalstressproteinfamily	1	1
MBOAT,membrane-boundO-acyltransferasefamily	5	5
CDP-alcoholphosphatidyltransferase	3	3
Gti1/Pac2family	3	3

ARD/ARD'family	1	1
Proline-richnuclearreceptorcoactivatormotif	1	1
Fructose-bisphosphatealdolaseclass-II	7	7
Mediatorcomplexprotein	1	1
Clpprotease	1	1
Lipid-dropletassociatedhydrolase	1	1
TypeIIBDNAtopoisomerase	1	1
Dcp1-likedecappingfamily	1	1
AmmoniumTransporterFamily	5	5
BAGdomain	1	1
Proteinofunknownfunction(DUF1348)	1	1
LamB/YcsFfamily	1	1
Septationproteinetd1	1	1
Ornithinecyclodeaminase/mu-crystallinfamily	1	1
Ubiquinol-cytochromeCreductasehingeprotein	1	1
CyclinMtransmembraneN-terminaldomain	1	1
Fungalpotassiumchannel	1	1
Cytidylyltransferase-like	3	3
CHYzincfinger	3	3
Proteinofunknownfunction(DUF2457)	1	1
ATPsynthase,Delta/Epsilonchain,beta-sandwichdomain	1	1
TATA-bindingproteininteracting(TIP20)	1	1
DNA/RNAon-specificendonuclease	1	1
Apc13pprotein	1	1
Uncharacterisedprotein(DUF2406)	1	1
RhoGEFdomain	1	1
RTC4-likedomain	1	1
ThiSfamily	1	1
HITzincfinger	1	1
RibosomalproteinL36e	1	1

CIDdomain	1	1
Yos1-like	1	1
Proteinphosphatase2AregulatoryBsubunit(B56family)	1	1
Proteinofunknownfunction(DUF962)	1	1
PWWPdomain	1	1
DHHCpalmitoyltransferase	1	1
ChromatinremodellingcomplexRsc7/Swp82subunit	3	3
Proteinofunknownfunction(DUF1765)	1	1
RibosomalproteinL11methyltransferase(PrmA)	1	1
Dualspecificityphosphatase,catalyticdomain	7	7
CPL(NUC119)domain	1	1
Triose-phosphateTransporterfamily	1	1
Fungaldomainofunknownfunction(DUF1746)	1	1
Bromodomainassociated	1	1
HistoneacetyltransferasesubunitNuA4	1	1
PWIdomain	1	1
Carbohydratekinase	1	1
Phosphomethylpyrimidinekinase	1	1
Mysoin-bindingmotifofperoxisomes	1	1
RibosomalproteinL34	1	1
VitaminB6photo-protectionandhomeostasis	1	1
Mediatorcomplexsubunit16	1	1
Proteinofunknownfunction(DUF1674)	1	1
HistonedeacetylationproteinRxt3	1	1
60sAcidicribosomalprotein	1	1
D-Tyr-tRNA(Tyr)deacylase	1	1
SAC3/GANPfamily	1	1
SisterchromatidcohesionproteinDcc1	1	1
RHOproteinGDPdissociationinhibitor	1	1
ExonucleaseV-a5'deoxyribonuclease	1	1

FKBP-typepeptidyl-prolylcis-transisomerase	1	1
C2domain	1	1
Nitronatemonooxygenase	3	3
Tht1-likenuclearfusionprotein	1	1
ComplexIntermediate-associatedprotein30(CIA30)	1	1
Mannosyltransferase(PIG-V)	1	1
Proteinofunknownfunction(DUF2433)	1	1
Fungalhydrophobin	4	4
RNAligase	3	3
Domainofunknownfunction(DUF4291)	1	1
Proteinofunknownfunction(DUF3112)	1	1
GPR1/FUN34/yaaHfamily	5	5
TrypsinInhibitorlikecysteinerichdomain	1	1
SISdomain	3	3
MRC1-likedomain	1	1
UbiquinonebiosynthesisproteinCOQ7	3	3
DNAreplicationfactorCdt1C-terminaldomain	1	1
GlycogenrecognitionsofAMP-activatedproteinkinase	1	1
RibosomalproteinL22p/L17e	1	1
Serinehydroxymethyltransferase	1	1
Ribosomalprotein60SL18and50SL18e	1	1
DDHDdomain	1	1
SOSresponseassociatedpeptidase(SRAP)	1	1
Down-regulatedinmetastasis	1	1
PeptidaseM50B-like	1	1
DNApolymerasephi	1	1
Rad9	1	1
Prephenatedehydrogenase	1	1
Atg29N-terminaldomain	1	1
PXdomain	3	3

N-acetyltransferase	7	7
Rogdileucinezippercontainingprotein	1	1
Bacterialextracellularsolute-bindingproteins,family5Middle	1	1
Fumble	1	1
TranscriptionfactorPcc1	1	1
3'-5'exonuclease	5	5
Ricin-typebeta-trefoillectindomain-like	1	1
MIOREXcomplexcomponent7	1	1
Prefoldinsubunit	5	5
SigmadomainonNACHT-NTPases	1	1
RibosomalproteinS26e	1	1
Gcd10pfamily	1	1
Chorismatesynthase	1	1
MitochondrialribosomalproteinS25	1	1
CytochromecoxidasesubunitVIIC	1	1
Ima1N-terminaldomain	1	1
GYFdomain	1	1
RNAmethyltransferase	7	7
Cytidylyltransferasefamily	1	1
Proteinofunknownfunction(DUF3636)	1	1
RibonucleaseH2non-catalyticsubunit(Ylr154p-like)	1	1
TubulinbindingcofactorA	1	1
RibosomalproteinL24e	1	1
MA3domain	1	1
Interferon-induced6-16family	1	1
Legume-likelectinfamily	1	1
PLD-likedomain	3	3
Sulphurtransport	1	1
EisosomecomponentPIL1	1	1
Inorganicpyrophosphatase	1	1

MT-A70	1	1
Cytochromeoxidaseassembly	1	1
RibosomalproteinL13e	1	1
Pam16	1	1
MitochondrialgenomemaintenanceMGM101	1	1
TB2/DP1,HVA22family	1	1
Sec1-bindingregionofMso1	1	1
Calreticulinfamily	1	1
Cenp-Okinetochorecentromerecomponent	1	1
EssentialproteinYae1,Nterminal	1	1
Mitochondrialinner-membrane-boundregulator	1	1
Cofilin/tropomyosin-typeactin-bindingprotein	3	3
HITdomain	1	1
Etoposide-inducedprotein2.4(EI24)	1	1
Protoglobin	1	1
Arylesterase	3	3
DAHPsynthetaseIfamily	1	1
EMG1/NEP1methyltransferase	1	1
ConservedoligomericcomplexCOG6	1	1
AutophagyproteinATG9	1	1
SGT1protein	1	1
Lecithin:cholesterolacyltransferase	1	1
Proteinofunknownfunction(DUF2013)	1	1
Gar1/Naf1RNAbindingregion	1	1
ATPsynthasecomplexsubunith	1	1
CP2transcriptionfactor	1	1
EukaryotictranslationinitiationfactoreIF2A	1	1
Retrotransposongagprotein	1	1
Nucleotide-sugartransporter	1	1
OsmC-likeprotein	1	1

AAA-ATPaseVps4-associatedprotein1	1	1
HistonechaperoneRtt106-like	1	1
ArgininosuccinatelyaseC-terminal	1	1
Proteinofunknownfunction(DUF1264)	1	1
MeiosisproteinSPO22/ZIP4like	1	1
NLIinteractingfactor-likephosphatase	1	1
MediatorofRNAPolymeraseIItranscriptioncomplexsubunit8	1	1
Acylphosphatase	1	1
RibosomalproteinS13/S18	1	1
Hepatocellularcarcinoma-associatedantigen59	1	1
Transcriptionalregulator	1	1
Alg9-likemannosyltransferasefamily	1	1
Putativedeath-receptorfusionprotein(DUF2428)	1	1
Proteinofunknownfunction(DUF3074)	1	1
AutophagyreceptorATG43	1	1
ChaC-likeprotein	1	1
Proteinofunknownfunction(DUF1223)	1	1
Nitroreductasefamily	1	1
AcidPhosphatase	1	1
PHdomain	1	1
Phosphatidatecytidyltransferase,mitochondrial	1	1
ATPsynthaseEchain	1	1
MitochondrialribosomalproteinL27	1	1
Utp14protein	1	1
HECT-likeUbiquitin-conjugatingenzyme(E2)-binding	1	1
WH2motif	1	1
MitochondrialribosomalproteinL37	1	1
PeptidasefamilyM49	1	1
Inosine-uridinepreferringnucleosidehydrolase	1	1
Mitochondrialpyruvatecarriers	1	1

MitochondrialribosomalproteinL51/S25/CI-B8domain	1	1
Proteinofunknownfunction(DUF1687)	1	1
RibosomalproteinL14	1	1
ATPsynthaseDchain,mitochondrial(ATP5H)	1	1
PhosphatidylinositolN-acetylglucosaminytransferase	1	1
SOH1	1	1
Thaumatinfamily	1	1
Domainofunknownfunction(DUF4336)	1	1
Salttolerancedown-regulator	1	1
PGAP1-likeprotein	1	1
Nucleolarprotein,Nop52	1	1
L-lysine6-monooxygenase(NADPH-requiring)	3	3
RibosomalproteinS19	3	3
6-O-methylguanineDNAmethyltransferase,DNAbindingdomain	1	1
ERCC4domain	1	1
Semialdehydedehydrogenase,NADbindingdomain	1	1
Phosphoglucomutase/phosphomannomutase,alpha/beta/alphadomainI	1	1
Cadmiumresistancetransporter	1	1
ExocystcomplexcomponentSec6	1	1
RibonucleaseP40kDa(Rpp40)subunit	1	1
Tim44-likedomain	1	1
RibosomalproteinS7p/S5e	1	1
PASdomain	3	3
Sodium:dicarboxylatesymporterfamily	1	1
Leucinerichrepeat	1	1
Transcriptionalactivatorofglycolyticenzymes	1	5
Fungalchitosanaseofglycosylhydrolasegroup75	1	1
RNApolymeraseIIIRPC4	1	1
N-terminaldomainonNACHT_NTPaseandP-loopNTPases	2	2
Phospholipase_D-nucleaseN-terminal	1	1

Mature-T-CellProliferationItype	1	1
Eukaryotictranslationinitiationfactor3subunit7(eIF-3)	1	1
Got1/Sft2-likefamily	1	1
Acetokinasefamily	1	1
HMG-boxdomain	1	1
O-methyltransferase	29	35
Condensincomplexsubunit2	1	1
Memo-likeprotein	1	1
Ssu72-likeprotein	1	1
AhpC/TSAfamily	1	1
Solutecarrierfamily35	1	1
CLN3protein	1	1
Ribosomebiogenesisregulatoryprotein(RRS1)	1	1
Mitochondrialribosomaldeath-associatedprotein3	1	1
RepairproteinRad1/Rec1/Rad17	1	1
Eukaryoticinitiationfactor4E	1	1
TRAPPtraffickingsubunitTrs65	1	1
DNAreplicationregulatorSLD3	1	1
BNRrepeat-containingfamilymember	1	1
RapidALkalinizationFactor(RALF)	1	1
Pyroglutamylpeptidase	1	1
DADfamily	1	1
GAFdomain	1	1
SANT/Myb-likedomainofDAMP1	1	1
Pentatricopeptiderepeatdomain	1	1
SUZdomain	1	1
Utp25,U3smallnucleolarRNA-associatedSSUprocessomeprotein25	1	1
Alteredinheritanceofmitochondria5	1	1
DomainfoundinIF2B/IF5	1	1
Glycosyltransferasefamily28C-terminaldomain	1	0

Uncharacterizedconservedprotein(DUF2183)	3	3
CoproporphyrinogenIIIoxidase	1	1
HOOKdomain	1	1
LYAR-typeC2HCzincfinger	1	1
R3Hdomain	1	1
KaiC	1	1
Domainofunknownfunction(DUF202)	3	3
Ubiquitin-2likeRad60SUMO-like	1	1
NMD3family	1	1
16SrRNAmethyltransferaseRsmB/F	3	3
LETM1-likeprotein	1	1
PeptidasefamilyC69	1	1
Vacuolarproteinorting38	1	1
Guanylatekinase	1	1
Fattyacidhydroxylasesuperfamily	3	3
EXSfamily	1	1
Ppx/GppAphosphatasefamily	1	1
3-hydroxyanthranilicaciddioxygenase	1	1
YT521-B-likedomain	1	1
NucleoporinNup120/160	1	1
ATPsynthaseregulationproteinNCA2	1	1
Pterin4alphacarbinolaminatedehydratase	1	1
Dpy-30motif	1	1
CatalyticLigBsubunitofaromaticring-openingdioxygenase	3	3
NADHubiquinoneoxidoreductasesubunitNDUFA12	3	3
Calponinhomology(CH)domain	1	1
Chitinrecognitionprotein	1	1
Glycosylhydrolasefamily62	1	1
3-dehydroquinate synthase	1	1
Chromatinmodification-relatedproteinEAF7	1	1

RING-typezinc-finger	1	1
RNApolymerasesM/15Kdsubunit	1	1
Surfeitlocusprotein5subunit22ofMediatorcomplex	1	1
Proteinofunknownfunction(DUF3431)	1	1
Histoneacetylationprotein	1	1
Alb1	1	1
Signalpeptidase,peptidaseS26	1	1
ReplicationfactorAprotein3	1	1
RibosomalproteinL4/L1family	1	1
Domainofunknownfunction(DUF4188)	1	1
Ribonuclease-III-like	1	1
Domainofunknownfunction(DUF4048)	1	1
TranscriptionfactorOpi1	1	1
CyclinC-terminaldomain	1	1
Syntaxin6,N-terminal	1	1
Domainofunknownfunction(DUF1857)	1	1
CDC45-likeprotein	1	1
ExocystcomplexcomponentSec5	1	1
mRNAcappingenzyme,betachain	1	1
PeptidaseC65Otubain	1	1
Isy1-likesplicingfamily	1	1
Bacterialproteinofunknownfunction(DUF885)	1	0
UncharacterisedACR,YagEfamilyCOG1723	1	1
KinetochoreproteinMis14like	1	1
VesiclecoatproteininvolvedinGolgitoplasmamembranetransport	1	1
DSBA-likethioredoxindomain	1	1
betasubunitofN-acylethanolamine-hydrolyzingacidamidase	1	1
Bacteriocin-protection,YdeIorOmpD-Associated	1	1
YhhNfamily	1	1
Proteinofunknownfunction(DUF1295)	1	1

Macrodomain	1	1
Stretch-activatedCa ²⁺ -permeablechannelcomponent	1	1
Eisosomeprotein1	1	1
AdaptinNterminalregion	1	1
Single-strandbindingproteinfamily	1	1
PheromoneAreceptor	1	1
Sterol-sensingdomainofSREBPcleavage-activation	1	1
B-blockbindingsubunitofTFIIIC	1	1
GolginsubfamilyAmember7/ERF4family	1	1
RibosomalproteinL1p/L10efamily	1	1
MinimalbindingmotifofHap4forbindingtoHap2/3/5	1	1
SBF-likeCPAtransporterfamily(DUF4137)	1	1
RibosomalproteinS21	1	1
Capsularpolysaccharidesynthesisprotein	1	1
Prolineracemase	1	1
N2227-likeprotein	1	1
Eukaryoticmembraneproteinfamily	1	1
U1zincfinger	1	1
Integrasezincbindingdomain	1	0
TFIIICsubunittriplebarreldomain	1	1
Ornithinedecarboxylaseantizyme	1	1
INO80complexsubunitles4	1	1
ThiopurineS-methyltransferase(TPMT)	1	1
OTU-likecysteineprotease	1	1
Hexapeptiderepeatofsuccinyl-transferase	1	1
PeptidasefamilyS58	1	1
PPIC-typePPIASEdomain	1	1
tRNApseudouridinesynthaseD(TruD)	1	1
Copper/zincsuperoxidedismutase(SODC)	1	0
Uncharacterisedproteinfamily(UPF0139)	1	1

BacterialIg-likedomain(group3)	1	1
Bucentaurorcraniofacialdevelopment	1	1
Domainofunknownfunction(DUF4602)	1	1
ESCRT-IIcomplexsubunit	1	1
Nucleosidetransporter	1	1
Cytochromec/c1hemelyase	1	1
BUD22	1	1
Integralperoxisomalmembraneperoxin	1	1
Acyltransferase	9	7
Lungseventransmembranereceptor	1	1
PutativeS-adenosyl-L-methionine-dependentmethyltransferase	1	1
Haspinlikekinasedomain	1	1
CytoplasmictRNA2-thiolationprotein2	1	1
pinin/SDK/memA/proteinconservedregion	1	1
ThreonylandAlanylRNA synthetasessecondadditionaldomain	3	3
ElectrontransferflavoproteinFAD-bindingdomain	1	1
39SmitochondrialribosomalproteinL46	1	1
U3snoRNAassociated	1	1
Nucleoside2-deoxyribosyltransferaselike	1	1
4Fe-4Sdiclusterdomain	1	1
MybDNA-bindinglike	1	1
Ribosomalproteins50S-L15,50S-L18e,60S-L27A	1	1
Mtf2family	1	1
CytochromecoxidasebiogenesisproteinCmc1like	1	1
Membrane-associatingdomain	1	1
POTfamily	5	5
Orotidine5'-phosphatedecarboxylase/HUMPSfamily	1	1
Carbohydrate/starch-bindingmodule(family21)	1	1
Lyticpolysaccharidemono-oxygenase,cellulose-degrading	1	1
High-affinitynickel-transportprotein	1	1

RmlDsubstratebindingdomain	1	1
Glyoxalase-likedomain	3	3
PBPsuperfamilydomain	1	1
Glyceratekinasefamily	1	1
Mus7/MMS22family	1	1
Pex14N-terminaldomain	1	1
PAPA-1-likeconservedregion	1	1
Proteinofunknownfunction(DUF4050)	1	1
Gon7family	1	1
HbrB-like	1	1
LIM-domainbindingprotein	1	1
EMC6	1	1
PHD-finger	3	3
UAAtransporterfamily	3	3
AMPdeaminase	1	1
Putativepeptidasefamily	1	1
TatDrelatedDNase	1	1
RNApolymeraseRpb3/Rpb11dimerisationdomain	1	1
Phosphatidylethanolamine-bindingprotein	1	1
LVIVDrepeat	1	1
Glycosylhydrolasesfamily17	1	1
MAC/Perforindomain	1	1
Domainofunknownfunction(DUF4604)	1	1
CytochromecoxidasesubunitVb	1	1
GCN5-likeprotein1(GCN5L1)	1	1
Ctf8	1	1
Putativediphthamidesynthesisprotein	1	1
DASHcomplexsubunitDad3	1	1
Sugar-transporters,12TM	1	1
Polyprenylsynthetase	1	1

CorehistoneH2A/H2B/H3/H4	1	1
UbiquitininfusiondegradationproteinUFD1	1	1
Proteinofunknownfunction(DUF726)	1	1
EutQ-likecupindomain	1	5
PRA1familyprotein	1	1
Aminoglycoside3-N-acetyltransferase	1	1
Arsenicalpumpmembraneprotein	1	1
Glucosamine-6-phosphateisomerases/6-phosphogluconolactonase	1	1
Diphthamidesynthase	1	1
Squalene/phytoenesynthase	1	1
TranscriptionfactorIwr1	1	1
MINDYdeubiquitinase	0	1
GlucoseinhibiteddivisionproteinA	0	1
Aromaticacidexporterfamilymember2	0	1
MOSCN-terminalbetabarreldomain	0	1
ABC-2familytransporterprotein	0	1
Proteinofunknownfunction(DUF1682)	0	1
Zinc-fingerofC2H2type	0	1
BEDzincfinger	0	3
Thymidylatesynthase	0	1
HypervirulenceassociatedproteinsTUDORdomain	0	1
Bladdercancer-relatedproteinBC10	0	1
PeptidaseC26	0	1

Supplementary data 2-Table 4 : predicted unique-gene families of <i>Fusarium oxysporum</i>. f. sp <i>albedinis</i> strains.		
Gene families	<i>Fusarium oxysporum</i>. f. sp <i>albedinis</i> 133.	<i>Fusarium oxysporum</i>. f. sp <i>albedinis</i> 9
	Gene count	Gene count
Prion-inhibitionandpropagation	1	0
FungalZn(2)-Cys(6)binuclearclusterdomain	1	24
FADbindingdomain	3	13
Asparaginesynthase	1	0
AMP-bindingenzyme	1	1
Fungalspecifictranscriptionfactordomain	19	41
Ankyrinrepeats(3copies)	15	43
DDEsuperfamilyendonuclease	41	273
Chromoshadowdomain	1	0
FMN-dependentdehydrogenase	1	7
AuxiliaryActivityfamily9(formerlyGH61)	1	1
RegulatorofGproteinsignalingdomain	1	1
hATfamilyC-terminaldimerisationregion	21	334
Possiblelysinedecarboxylase	1	0
Responseregulatorreceiverdomain	1	0
Transcriptionalactivatorofglycolyticenzymes	1	3
WGRdomain	5	1
MOSCdomain	1	0
CentromereDNA-bindingproteincomplexCBF3subunit,domain2	1	31
Beta-lactamase	5	9
WDdomain,G-betarepeat	1	9
NACHTdomain	1	9
Enoyl-CoAhydratase/isomerase	1	0
Sulfatepermeasefamily	1	5
Chromatetransporter	1	3

Multicopperoxidase	1	0
Tetratricopeptiderepeat	1	9
Proteinofunknownfunction(DUF3638)	1	0
Cyclin,N-terminaldomain	1	1
Reverse transcriptase(RNA-dependentDNAPolymerase)	13	160
Calcium-dependentchannel,7TMregion,putativephosphate	1	5
Sodium/calciumexchangerprotein	1	5
Tc5transposaseDNA-bindingdomain	5	43
shortchaindehydrogenase	3	5
TransposaseIS4	19	85
LysMdomain	3	0
Sugar(andother)transporter	3	9
Heterokaryonincompatibilityprotein(HET)	3	21
MajorFacilitatorSuperfamily	9	9
Domainofunknownfunction(DUF5071)	1	0
Orsellinicacid/F9775biosynthesisclusterproteinD	3	25
WSCdomain	1	3
AIG1family	1	1
CytochromeP450	9	25
Fungalproteinkinase	1	1
alpha/betahydrolasefold	3	1
Whi5like	1	1
GlutathioneS-transferase,C-terminaldomain	1	1
Proteinofunknownfunction(DUF1593)	1	0
RNaseH	10	23
Glycosylhydrolasesfamily18	3	7
CHATdomain	1	11
Cellulase(glycosylhydrolasefamily5)	1	1
Flavin-bindingmonooxygenase-like	1	5
NADH:flavinoxidoreductase/NADHoxidasefamily	1	3

Ulp1proteasefamily,C-terminalcatalyticdomain	1	1
Phosphatidylserinedecarboxylase	1	0
MAC/Perforindomain	1	1
Proteinofunknownfunction(DUF4238)	1	0
Glyoxalase/Bleomycinresistanceprotein/Dioxygenasesuperfamily	1	0
Methyltransferasedomain	1	5
CFEMdomain	3	1
Phosphotransferaseenzymeefamily	3	0
Berberineandberberinlike	1	1
HNHendonuclease	1	1
Serinecarboxypeptidase	1	1
PIF1-likehelicase	1	17
Acetyltransferase(GNAT)family	1	0
NADdependentepimerase/dehydratasefamily	1	0
DnaJdomain	3	3
Amino-transferaseclassIV	1	0
Cationtransportprotein	1	0
Basicregionleucinezipper	1	0
GAG-pre-integrasedomain	1	1
Fumarylacetoacetate(FAA)hydrolasefamily	1	1
Commoncentraldomainoftyrosinase	1	0
NmrA-likefamily	1	17
Cysteine-richsecretoryproteinfamily	1	3
Permeasefor cytosine/purines,uracil,thiamine,allantoin	3	1
Retrotransposongagprotein	1	1
FAR1DNA-bindingdomain	1	0
BRCA1CTerminus(BRCT)domain	1	0
Helitronhelicase-likedomainatN-terminus	1	99
Endonuclease-reversetranscriptase	1	19
Tubulin-tyrosineligasefamily	1	0

Poly(ADP-ribose)polymerasecatalyticdomain	3	7
DEAD/DEAHboxhelicase	1	5
Uncharacterizedalpha/betahydrolasedomain(DUF2235)	1	7
Acetyltransferase(GNAT)domain	1	0
RNA3'-terminalphosphatecyclase	1	0
GLEYAdomain	1	0
Aminoacidpermease	1	3
L-asparaginaseII	1	0
Sodium:neurotransmittersymporterfamily	0	1
Alpha-acetolactatedecarboxylase	0	1
RecQzinc-binding	0	3
Histidinekinase-,DNAgyraseB-,andHSP90-likeATPase	0	5
Glycosylhydrolasefamily1	0	1
MULEtransposasedomain	0	86
Bul1Cterminus	0	1
Bromodomain	0	3
E1-E2ATPase	0	1
Mis12-Mtw1proteinfamily	0	3
N-terminaldomainofNWDNACHT-NTPase	0	7
Melibiase	0	1
GlutathioneS-transferase,N-terminaldomain	0	1
PEP-utilisingenzyme,PEP-bindingdomain	0	1
RNaseH-likedomainfoundinreversetranscriptase	0	15
Putativelumazine-binding	0	1
CoAbindingdomain	0	1
Glycosylhydrolasefamily3C-terminaldomain	0	5
Subtilasefamily	0	1
Dihydrodipicolinatesynthetasefamily	0	1
AlcoholdehydrogenaseGroES-likedomain	0	1
Ringfingerdomain	0	1

Chitinsynthase	0	1
Matrixin	0	1
AcyclicterpeneutilisationfamilyproteinAtuA	0	1
tRNAsynthetasesclassII(D,KandN)	0	1
Dak1domain	0	1
Zincfinger,C2H2type	0	5
Aldehydedehydrogenasefamily	0	7
GMCoxidoreductase	0	1
HelicaseconservedC-terminaldomain	0	5
Sulfotransferasedomain	0	3
Integrasezincbindingdomain	0	1
Trypsin-likepeptidasedomain	0	5
Middleorthirddomainofpeptidase_M16	0	1
Proteinofunknownfunction(DUF3435)	0	1
Proteinkinasedomain	0	19
Proteinofunknownfunction(DUF659)	0	17
Proteinofunknownfunction(DUF4246)	0	3
Putativeserinedehydratasedomain	0	1
Regulatorofchromosomecondensation(RCC1)repeat	0	1
ScaffoldproteinNfu/NifUNterminal	0	1
AdoMetdependentprolinedi-methyltransferase	0	1
Proteinofunknownfunction(DUF1275)	0	1
CoenzymeAtransferase	0	1
CoA-transferasefamilyIII	0	1
PutativeFMN-bindingdomain	0	1
Ubiquitincooxyl-terminalhydrolase	0	1
26SproteasomesubunitRPN7	0	1
ABC-2typetransporter	0	1
Glycosyltransferasefamily28N-terminaldomain	0	1
Domainofunknownfunction(DUF1989)	0	1

ABCtransporter	0	3
Alphaamylase,catalyticdomain	0	1
Frequencyclockprotein	0	5
TctoxincomplexTcAC-terminalTcB-bindingdomain	0	1
Caspasedomain	0	3
bZIPtranscriptionfactor	0	3
Phosphorylasesuperfamily	0	3
ABCtransportertransmembraneregion	0	1
Las17-bindingproteinactinregulator	0	1
Egh16-likevirulencefactor	0	1
3-oxo-5-alpha-steroid4-dehydrogenase	0	1
TCP-1/cpn60chaperoninfamily	0	1
Peroxidase,family2	0	1
GDSL-likeLipase/Acylhydrolase	0	1
RTA1likeprotein	0	1
Amidohydrolase	0	1
MYNDFinger	0	1
Proteinofunknownfunction(DUF2985)	0	1
Patatin-likephospholipase	0	5
Chromo(CHRromatinOrganisationMODifier)domain	0	5
Pleckstrinhomologydomain	0	3
ER-boundoxygenasempaB/B'/Rubberoxygenase,catalyticdomain	0	1
EsteraseFrsA-like	0	1
BacterialsignallingproteinNterminalrepeat	0	1
helix-turn-helix,Psqdomain	0	7
3-beta-hydroxysteroiddehydrogenase/isomerasefamily	0	3
Domainofunknownfunction(DUF1996)	0	3
Beta-lactamasesuperfamilydomain	0	3
Proteinofunknownfunction(DUF3533)	0	1
BTB/POZdomain	0	1

Proteinofunknownfunction(DUF3716)	0	9
Beta-ketoacylsynthase,N-terminaldomain	0	1
Spherulation-specificfamily4	0	1
Fungalproteinofunknownfunction(DUF1752)	0	5
Aldo/ketoreductasefamily	0	1
Reticulon	0	1
GATAzincfinger	0	1
Alginatase	0	1
HSF-typeDNA-binding	0	1
Ca ²⁺ regulatorandmembranefusionproteinFig1	0	1
Dienelactonehydrolasefamily	0	3
HpcH/HpaIaldolase/citratasefamily	0	1
Integrasecoredomain	0	1
Sulfatase	0	1
Glycosylhydrolasesfamily43	0	1
Glycosylhydrolasesfamily28	0	2
SurvivalproteinSurE	0	1
Myb-likeDNA-bindingdomain	0	1
Proteinofunknownfunction(DUF3429)	0	1
Zincknuckle	0	1
OTT_1508-likedeaminate	0	1
BacteriallowtemperaturerequirementAprotein(LtrA)	0	1
UV-endonucleaseUvdE	0	1
FtsJ-likemethyltransferase	0	1
Proteinphosphatase2AregulatoryBsubunit(B56family)	0	1
Conservedhypotheticalprotein(DUF2461)	0	1
Pyridinenucleotide-disulphideoxidoreductase	0	3
EutQ-likecupindomain	0	1
FADdependentoxidoreductase	0	1
BEDzincfinger	0	1

Eukaryoticproteinofunknownfunction(DUF829)	0	3
Glycosylhydrolasefamily45	0	1
vonWillebrandfactortypeAdomain	0	1
Proteinofunknownfunction(DUF2722)	0	1
Up-regulatedDuringSeptation	0	1
Amidase	0	1
Meioticallyup-regulatedgenefamily	0	3
Enoyl-(Acylcarrierprotein)reductase	0	1
Extracellulartail,of10TMputativephosphatetransporter	0	1
NAD(P)-bindingRossmann-likedomain	0	1
Proteinofunknownfunction(DUF3455)	0	1
PAP2superfamily	0	1
Linalooldehydratase/isomerase	0	1
Ferricreductaseliketranmembranecomponent	0	1
PutativeERtransporter,6TM,N-terminal	0	1
Eukaryoticaspartylprotease	0	1
AminotransferaseclassIandII	0	1
Glycosylhydrolasefamily3Nterminaldomain	0	1
Familyofunknownfunction(DUF6060)	0	1
SnoaL-likedomain	0	1
OxidoreductaseNAD-bindingdomain	0	1
Globin	0	1
Glycosylhydrolasesfamily32Cterminal	0	1