

Non-plant PDI-C Isoforms

NCBI Reference Sequence: XP_005716385.1

>C.crispusPDI-C1

MLKLSSYDVFRKLPRDLTHGTSQGGVLSVLAVALILLVFLFELWTVYVAGEVETAVMLDTNREALLQINFK
VTALRLPCEFAFASVDVWDYLGNTRLDLTKNLHKTMTVSGPRGRDILGAYSDGNFASNGDSEDEVKAHIGLSE
SEEIMQSNFDQKLAENAWTFVDFPAPWCIHCVKLAPTWEAFKTVHDKDIRVKVFKVDCTKNEFLCRSQQ
ISGYPTLRVYKGNHPQHPDYFGKRTVSTLISWEMSMTHEHAHAKTRLHKEEGCLVEGAIWVNRVPGNFHI
TAKSKGHDFDPKAMNLSHVVHHFSFGKPLPRRVIRHLPDDVKRNINPLDGRS FVNTEEHTTHEHYIKVVS
THYRVGKSSIFNREDSLGYQMATS NHRYKSDPGIPEAKFSFDLSPTAVV I IQGGKRWYEFVTSLCAIIGG
IFTVVS LFDGAMYSISKRVKGVQGKLS

NCBI Reference Sequence: XP_005715706.1

>C.crispusPDI-C2

MFKISMLDLFRKVPVDLTQATRGGLLSLAVATIIIGLVLFCEVWPTYLEGETKSRIILDSNTESKLEINFE
ISFFELPCRANVEVWDYLGNAKLNVDADISKTILGHEQENENHLETKDKGT VATQLVDKHEDAHLPEQV
VELTSSNYGQYLKQNEYTFVIYYVNWCGFCKMALPVWSKFAKHLPSIRPNVKIAQVDCEKNAELCQATKI
TGYPTFIMFKGVNPLEEDYGGERSVEAFSKYVEKVS DTPDDHNLKYQWQEGCLLGGRLLVNRVPGNFHI
SAKSDAHNFDQKSTNTSHLIHHL SFGGEMQHDLYMAVPKDIRVNI SPLDDILFINHKEHMSHEHYIKVVS
THYQAGSLRRRKDVLGYQMATS NHQYKSDPNVPETRFSDLSPTAVVISQAGR R WYEF L T S L C A I I G G T F
TTFSLMDGVLHSMQRRLARPVTPSSKLT

The *Porphyridium purpureum* Genome Project: evm.model.contig_3636.1

>P.purpureumPDI-C1

MRLAVYDLYRKVREGAESTVTGGF LSVLGVALIVVLGIAETVSFLGAPKSMAVEVDRNMDES LQVNL D I L
LMRMP CNMVSLETWDYTGTSQLRHEDLSTKYVVF GDQGEFNLGEAGVMGHLEHMKNEHLL EQVTHEAAEE
LVDANFASKLNKEPLAIVKFYTPWC IWCQRLVPHFAALPDALA QVGLPGTKL FKVNCVENLESCRGIAGF
PTVRYFVKGKQP TPDYRGDRTAQDMAQWVANGVKKVDSASGETNKFVVRKQAHGTVMRRVADENLPEGCR
IIGALKVSRVPSNIHIVAAATTFDINPREVNLSHRVNI F SFGSMMSPQRLLR LPIFAQYNVNP FNGQSFV
ATEKHILFDHYLKVVTTRFARHRGKRAWSLDDALQDRRAYLV TASTKSTIADPNVPEIRFSYDFSPFATV
VFQKTDKTYDYLTNL CALIGGVW TILQLV DSTL FNLVH SKIKTMOGKLG

The *Porphyridium purpureum* Genome Project: evm.model.contig_2262.7

>P.purpureumPDI-C2

MVVVEGNRASKAAWRMRFGELDLFRKVPDRDLVQSTR LGGALSLLALALLSVLLMTELS DMGRATTSTSLQ
VDRAPSS EPVTL SFRIALMSL PCKYVDVQLLDTRLRTATQSQR LVLKKT ELADGAKYLD SLSKPLEQIRR
YDKQGVVRPLGAPEEDNDSADQSGVTITVEQFRNNIVTRSPYTLVYFYLPYCPFKSLVPVWEEVERKIS
SDVARFSRGVIKVVKIDCITSKELCIDQHMAVPTIRVYERDTVLRPDYHS AKREAEDILAWVLGKITGA
DAKRAAAA SGQDAAREISSKEGCVVSGSAQVQKSPAFMRI SANAENYSVEAQHVNMTHLVEYFTANYEIP
GD TTSK LHPMIALNLD TMHHTAFVTSK SQEGMSFDHYLKF IPTTYRSRWGPKQRL FQMTAASHGYKQHG
AAEIRVSYDFSPLVHVVEKQNTKQWYEF LAKLFAIIGGVICVVG LMDKGIYTYVAYQQKVRQKQI

NCBI Reference Sequence: XP_005786077.1

>E.huxleyiPDI-C1

MGIADALESLHLRYKVPDRDLTDATRLGGAI SLATAFLMAYLFLSNIAEFMSVRSSTDVALDDSTEAKMRI
YFNITMERLPCQFASVDVSDVMGTS LTNVTQHIIKFKVAPEAGHRKA EYYRERDD DVEHEVLDDEEQGYL
DTLPATLPQLNDHSFEQTIKSYDLVLVAFGAPWCPWSQR LDPVWRKTWELLKQKPYRDHVRIGKVDCTAS
DSHSTCQKHHIHAFPTIRIYRHRQVHSHENYLG NRDSAVFIEFVEEALPKHLVTGGGGAPLDADKAAAAA
RSVESHTLAGEGCQLTGSLEISRVPGSFRISAQSDAHSFN SRVMNVSHHV DKL LFAYTDERPAKTHKVIS
IEERS SLYQMGMFMH QELATLKH YLKVVPFH HHDLSGHV TQAYLYKANYEYRPRKLEWYEGKADAHVDT
QMVPNAVFFHYDISPVKVVVQEESEALAAFVTKICAVIGGIYTVVGLLDSVMYHSVQSF SSKK

NCBI Reference Sequence: XP_005782141.1

>E.huxleyiPDI-C2

MVRLRDAHFFRKVPVDVSEGTAVGGLLSVA AVL VACWL VSEEISAYSTAKLTTQMALDHTAMPSP LGPAA
YESIRVNFNISM LRI PCQYATL FVSDHVG AHKSGGARNMHKVR LDREGRSLGMYS PHRYAGSYRPGPYQL
DDGTALDEQGFQALAKSKAGVMVNFAPWCFWSQKLP AWEAVGRRLHARAYSQSFAFVRVDCTSAKGRD

LCRSHSIHAFPTVRTYRGSVHAFEPYEGREENVIWLHMVKIAAEVQRMHDPSPLEDEGSPLEWEEE
AGHEGCNLFYVEVSRAPGTIHLAPHSSRHSFDFSHVNTSHHIDHLSFGLELGAIERGLPPDVRKHLLS
LDGRAFTAATAHLTQEHVNIIVPTRYQPAGSVAHVETYQFTATSHARTKDTLPSLLISYDVSPIQVNI
LRQPTSELVLSFCAIIGGVAVFGIIDGMLYTGSAVVRQKLSAGKLG

NCBI Reference Sequence: XP_005783917.1

>E.huxleyiPDI-C3

-----MGRKSYGPNLNYFKHVPDDLVTSTPGLIISALGTVVLITLFLFELSAYLTVTSTT
DLVVDELVDETLRVNFNVTLHQVPCFELSVDVSDMTGAATHDIRKDILKWRLDSNQRVVRDAAAVSAVET
RDAKRAADAAMSKEPVSPSYGDEDEEEPPDSDLQPLSPDTFVFPFLOQHELVLNFIYAPWCICQRLPEV
YLEAAAKVPSLEFHGHTRLAQVDCVAFQEFVCKHMIRAYPTLRMYKDGNDKEFELFTDERSVGAAILGFVR
KQMDSYRTSHAVLRKQHAARFEVRRGALSAGRDLYRAKMPIVAANTFCGNNEECIGFTYAAEEMPAKDAK
PDPFMPGENPLIYFKSGRAGEAQVNADKQWTSYLKINNTAPVSSGSLHHGPEGCMVAGHLRVRKVPVGV
LKLVLHSPHDHEHALINSSHAVNEFWYGEPLSRFQRSRLSEADRFEIDSPTSHRLESIPFISDAAGDSH
VHYLKVVTKVVRHYSARDADTLVYKYTVHSNKYSSPEAQEPSVDFKYDLSPISIVVQQQRMPPAYRFVVTST
CAIIGGVFTVIGIIEAVLHTATESFLKKQM

NCBI Reference Sequence: XP_005830975.1

>G.thetaPDI-C1

MSGFLQGLKSVDFYRKLKRDLDLQELTEASVSGAALSIIAAVIMIGLVAAELTAYLTVQSESRVVDLHDFES
SSDDTLQVNFNFTFPHLKCDYASVDATNFMGTHDAGLAARVSKIRLDKNGNLVGRHDDNKKELRHTTDEV
HDGPETSIALTTDNFEASHHKYAIMIVNFIYAPWCHWCQRLAPVWEKSAATIAQKFPGDERIILAKVDCTH
QSSEALCIKYRIDAFPTILVFRKDDKGDQSHESYHGERSVPAITQWAEHFMSQLNNEVPKSRVTDANKDG
VVDSHNGVGCVMVSGLLHVQRAPGMLKVQAVSDSHEFNWETMDVSHTVNHLVSGPFLSETAWMVLPPIIAA
SVGSLDDRSFTSDQHVPPTTHEHYVKVVRHEVTPSSWKVAQITSYGYVVHSNNIQKAGEVPTVRINYDIL
PIIVQFHEKKQAFYHFVTNLCAIVGGVFTVAGIIASLMDKSINLMRKKQELGKLG

NCBI Reference Sequence: XP_005841401.1

>G.thetaPDI-C1

MPTLAQMALSWRKIKHDLNAELTEGTTIGSIIISILTGVLVYLIVAQIFAWRALNSETSVVLDHYSHMKT
GADSLQINFNFTFNHLSCEYASVDAANFMGTHDAGISSKVTKVHLDKNGRQLGVHKKERKNLKHITIDEAP
HEGESKLITLTAGDFDKHRFEHEILVVNFYTPWCHWCQKLEPVWEKSAKKGAEHPDDARLVLAKVDCTS
DKAESLCTKYHIDAFPSIMVFRKDDPLDKDHEKYHGERSVDAIVSWAEHLMKQVNLQAPKSRVVDKEQDG
EKESHNGVGCVMVAGMLHVQRAPGSIILQAVSDGHEFNWATMDVSHTVNHLVSGPFLSETAWVMPPIAQA
AVGSLDDKKFLSEERTPTVWEHYVKVVKVVELPRSWGIPVVEAHGYVVHTNKVQRYAEVPTARINYDIL
PIIVHVKTSRESNYHFLTKLCAIVGGVFTVSGIFASMVEGGIASLTHKETIGKLG

JGI Genome Portal: estExt_Genewise1Plus.C_230042

>B.natansPDI-C1

MQSLKQDFDYKRIIPADFRVQTSGGGTISMLAALFMTLLFTLELWSFIAGHESTTIVVDQDSATSIWVNFN
VTVPSCHCDHISVDVEDMLGTVMMDIQKNVEKVPDENGEQMPDLHSHHHAAPKDHVSEAENLVANEAT
TKDTYPEPTVLAADTFTKYVDSHEWVVFYFGASWCHWCQKLDPIWKSAGEVLKNRGAAITLPKVECTKDT
LCQEHQVHALPTIQLFHNGHLVPPNYRGPRTVNDLVHFAENAAVSKKKAEEAKVANKGKTRSDVGCSSVSG
HLLVHRVPGSVQFSVKSGEHNFNREHINFTHVVHHSFNVSVPESWEQMLAVMEDDSHRALVSKWYGRNFN
SPKDHVVHEHYLKVVTQTLRPLGLSSEKQMYEHTISSHSYVSEQLAHVRFHYDLSPMQVVKWKRRPFYE
FITNLLALIGGTFTVMGIVNEAYNGVVAKARMGKLG

JGI Genome Portal: aug1.35_g11347

>B.natansPDI-C2

MSVNDALKHFDYKTIQTDIRDKTVAGGAVSLLAAVIMGTPIHSITIDHDHNSPTAGAFWVNFIDITLPA
ITCDHISVDVEDRLGSRIFDIQKNVEKIPLDKEGVEAAILPDEIHIKAPDGHVTLKELQDVVANPDI
TNDTVNLEADKFMWVESHEWVSLVFRVDWCPWCQMLVPIWKSSAVILSNREVPVPLATVECTKHMDLCK
EAGVTAFTPTIKLYHWGKHVAPDYKGRKTVNDIVHFAETAADQKAVAEKAGVNVSDTHRSVGVCTVVGHLF
VHKVPGRIQLSLSDTHTFNREAVNFTHQVHLSFNNDIPETEEEMEAIMLDHEIQDKVSRWLSQFTSHT
KHTMHEHYLKVVEKRLFKDIRDTAISCVVVKMSSEYVVEYKYNQGGFWANANRIYEHSISSHSYATDSH
LPVAVKHYDLSPLQVSVHEHQSRPWFSTITMVCALVGGAWSIMSVVNDVATSSGLGKMFADAKTLRASS

GenBank: ETO29283.1

>R.filosaPDI-C1

MDVLLKFD AFRKIPKELTNPTLHGAYLTVVAYVVMALLFFMELGAYLSTTVQKSVELDEHFDEHIWIDFD
VQMFELPCEYTHVVKDIVGNQELEILDQQITKERISVDSNTFKGVIDEEKDAEHRGLNEDIDHHHAQTK
KYEHEPELEADWDSTSDQFQHNDFNVALEYHDFTMVNFYANWCSHCRNFAPTWKEAEDRTDQMEFRDKNGA
VVATKLLRVNVCVDFG-----ELCASIGIRAYPTVRLYKHKDSFTQYTG
PREVQGIVNFITDFIHNEDTGKHEVVTHHSSLQEGCRVHGELLVRRVPGYFLLLEADSKLDSLDPMTNVS
HRVNHLIVGDRDAMRDYVKNNTASKVTQDILKNVQPMKRANFITSKAHTAPQHYNVIPTRFDDKVVVYQ
ATVQSHIADVEITSVPQARFQYIFSPLSIHINTKGRPLYDFLTSTVFIIIGGTYTFISLLDKFWDSVSVRL
KKNIGKL

GenBank: ETO21548.1

>R.filosaPDI-C2

MDFLLKFD AFRKIPKELTNPTLHGAYLTLVAYVVMSSLLFTMELYAYLSTSEQKSVELDEHFDEHIWIDFD
VHMFEHPCEHTHVIVKDIVGNHELEILDQKISKERIGLDSNEFKGLLDEDKDAEHRGLNKDIDHHLAIE
KSAHEPELEADWDSTSDHFQHTDFNAVLEYHDFTVVNFYANWCIHCRHFAPTWKEAEEETDRMEFRDKNRE
VVVAKLLRVNVCVDFGDLCARIGIRAYPTVRLYKHKDSFTQYTGPREKQSIINFVKDFIHNEDTGKHEVVA
HHRLQEGCRVHGELLVRRVPGYFFLEAESKLDLDPFMTNVSHRVNHLHIVGDRAAMQDYAKRTASQVT
RDIKNTPEPMKSTSFITFKPHTAPQHYNVIPTRFDDKVVVYQATVQSHLADVEITSVPQARFQYVFSPL
SIKVSTKGRPLYDFLTSTVFIIIGGTYTFISLIDKFWDTISVRFKTQINKLT

GenBank: CCI45882.1

>A.candidaPDI-C1

MGAMDVLKWKDFYKIPEDLTVSTLPGVSLDIVGCFIMLILFILEFNAYLTVNYAYDIVIDEGLDEKFEI
NFNITIPDLPCFASIDVSDMTGTRKHNMTKHKVAKIRMDGKGRLLGLANAEITHPKYANDDYGDLPESD
AVVTKLDASNFESFLKEHHYVAVDFPAPWCWCKRLEPIWTRVAKTLPPLSHYGQRMRVASVDCDDHADLC
MKQFVRAFPTILFYKDGGETSPVEMYGDRTEAFVDKFKKIFDGEVDDTEVRKKVLFQDTKHAIQLGRV
APKNAGPEGCQLYGH LIVKRVPGNFHILSHPSYSMNSSLVNASHTVNELWFGETLSASALAKLP PPHTRL
DSHRLAQEFTAYMENYTYVHYIKVVNTNTYVQRNGEAI SAYRYTAHSNEYLETEDLPSVMFRYDLS PMSV
RVTERAMPFYHFVTSACAIIGGVFTVIGIIDQLVHQTVRAMNKKVL

GenBank: CCI46463.1

>A.candidaPDI-C2

MVPKSFSKFDLFRKVPDHLSEHSSLGTVFTVLTFLVLSVYLILVNFERSYQGTSNHSIVIMDDHQEDQLRIN
FNISLLAIPCQFASVDVSDYIGMQLINITRHLRHFQLATTDQSSSHVQRVQEIFIHDNSKGLPIWGGVSR
TTRQGVHYSHQLDTEFTFDVYMKKYELVLINYYAQWCPFSQQLNPEWEKAAAQLQDHPYSETVAMATVDC
TDRKSAWLCRRAHVRAFPSMLIYIYGNTYTRYIYNGPRDANHILQFLDLFYRRLEPDMDFAEETFLSEGT
GGLAHHQGLNHKNLQSLNAENSQKKVKLPVGAVEGCEVSGSLNVNRVPSRLVFTARSKDLSFDLSGINVT
HIVHLSFGQVTRKQYSKATQSSMSFDHFSMDGKIFRTENENITVEHFLSVIGVNHMEAKSKRFLVERT
YEIVARSNQYNATDMLPAALFTFDISPLVIQLSLDSMPLYRFITSLCAIVGGMVTIIGFVDAGVFHTMNS
IKRKRRLGKLN

GenBank: CCI46462.1

>A.candidaPDI-C3

MPMVPKSFSKFDLFRKVPDHLSEHSSLGTVFTVLTFLVLSVYLILVNFERSYQGTSNHSIVIMDDHQEDQLR
INFNISLLAIPCQFASVDVSDYIGMQLINITRHLRHFQLATTDQSSSHVQRVQEIFIHDNSKGLPIWGGVSR
SRTTRQGVHYSHQLDTEFTFDVYMKKYELVLINYYAQWCPFSQQLNPEWEKAAAQLQDHPYSETVAMATV
DCTDRKSAWLCRRAHVRAFPSMLIYIYGNTYTRYIYNGPRDANHILQFLDLFYRRLEPDMDFAEETFLSE
GTGGLAHHQGLNHKNLQSLNAENSQKKVKLPVGAVEGCEVSGSLNVNRVPSRLVFTARSKDLSFDLSGIN
VTHIVHLSFGQVTRKQYSKATQSSMSFDHFSMDGKIFRTENENITVEHFLSVIGVNHMEAKSKRFLVE
RTYEIVARSNQYNATDMLPAALFTFDISPLVIQLSLDSMPLYRFITSLCAIVGGMVTIIGFVDAGVFHTM
NSIKRKRRLGKLN

GenBank: CCA19024.1

>A.laibachiiPDI-C1

MGAMDVLKWKDFYKIPEDLTVSTLPGVSLDIVGCFIMLILFILEFNAYLSVNHAYDIVIDEGLDEKFEI
NFNITIPDLPCFASIDVSDMTGTRKHNMTKNVSKFRIDTKGRLVGFASDEVTHPKYSNDEEYGELPESD

AIVTKLDATNFESFLKEHHYVAVDFFAPWCIWCRRLPEIWTTRVAKTLPSTLHYGQRMRVASVDCEEHAELC
QKQFVRAFPSILFYKDGGETSPVEMYYGDRTLESFVNKFKSLFDGEVDMAEVRKKHYLEQDTKDAAKLGLA
APTNAAGPEGCQLYGHLLVIVKRVPGNFHILSHPPFYSMNSSLVNASHTVNLWFGVLSASALAKLPNTRL
DSHRLARQEFAYMQNYTYVHYIKVVTNTYVQRNGEVI SAYRYTAHSNEYLETEDLPSVMFRYDLSPMSV
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GenBank: CCA20033.1

>A.laibachiiPDI-C2

MTMVPKSFKFDLFRKVPPEHLSESSLGTVFTVLTVLVLSVYLITVNFERSYQDTSIHSIVVMDHQEDQLR
INFNISLLAIPCQFASVDVSDYIGMQLINITRHLRHFLQATTAAHSPGNVQORVQEI VIHDGDKGLPTWGGV
SRTTREGVHYSHQLDTEFTDFMFMKKYELVLINYYAQWC PFSQQLNPEWEEAAAQLRDHPEYSETVAMATV
DCTDQKSAWLCCRRAHVRAFPSMLIYIYGNTYTRYIYNGPRDAAHILQFLDLFYRRLEPDMDFAEETFLSE
GTGALAHHQGLNQENLQSLNANNPEKNVKLPVGSVEGCEVSGSLNVNRVPSRLVFTARSKDLSDLRGIN
VTHVVHLSFGQVTRKQSTKSTQLSMSFDHFPLDGKTFRTENENITVEHFLSVIGVDHMEAKSKHMGLVE
RTYQIVARSNQYNATDMLPAALFTFDISPLVIQMSDSTPFYRFLTSLCAIVGGMVTIIGFVDAGAYHAM
NSIKRKRQLGKLN

NCBI Reference Sequence: XP_008868410.1

>A.invadansPDI-C1

MGAMDVLKKWDFYKVPEDLTVSTLPGVSLSIIGCVIMFILFVLEFNAYLTVAHDYQIVMDEGLDEMLRI
NFNITVPLRCEFATVDVSDQTGTRKHNMTTDIYKIRIDSKRRILGMSAEEQPKPYADDSIYGDLPESD
AVVTVLTPTNFESFLKEHHYVAVDFFAPWCIWCRRLPEIFVRTAKSLPSTLHYGQRMRVASVDCQQYGEELC
ESQFIRAYPTIMFYKGDGDISPVEMYHGDRTLEAFLAKFKSLFDGEQDFSENRRKQLHEEDKKEAASKGVV
IAKAPGAEGCQLYGHLMVKRVPGNFHVHLQNPSSYMGVNVASHVVGELWFGEPVAYDQMNRLPKDAHAHL
YAHRLGREGFISYATEHTYVHYIKVVTNSYVQSNQDVLNVYKYTAHSNEYKEENDMPSIMFRYDLSPMSV
KISEKSVFFYHFLTSACAIIGGVFTVIGLLDQIIHQTVRALNKKVL

NCBI Reference Sequence: XP_009040032.1

>A.anophagefferensPDI-C1

-MDFYRKVPDELKEASRTGGLSLCACGVVALTLVTEIGAFRLRTEVTRKIDVDTFAGSQLRVNFNLSFPH
LHCDYASVDLWDKIGRNQANVTQNIKQWQLEDEDGVKRMVQGRNRRAFDIDHDVHHPPIEEMHANGVHVWH
VNADEWEGLEHHEHYVFDYAPWCLYCQSLRSTWEALAELEKRD LGVAVAAVDCVDNEAFCHDMKVQT
FPTLRFYHHGEGVNEGEYRFDRTVAALTDVTRKLESENIYRQYPEARVAHAANWNTDHPGCLVSGFLLV
NRVPGNFHVMASRHSLNLTNRNLSTVHHLVSGVPLTDAQHRKLATIDVRHARTDTLDGEDYHHDDYH
YAYQHVFVHIVPTKYNLGVFWRDRFAAFQTLHSHLLKYAEHVPPEARFSYDISPMAVVVDTVRVKWDYDFL
TSLLAIVGGTFALFKLANDTAARLF

NCBI Reference Sequence: XP_009040624.1

>A.anophagefferensPDI-C2

MSGGLKVIDFFRKIPADLTEATVVGATLSIAAGVFMAILFVVELWAFLLSTTIETGVMLDTNAETLLRINFNV
TMLDLRCDYAAVDVVDVLTNSMNVTKNVEKWQLDETGKRMI FQGRNREQKAIQHDEHHPEIEELHKNGVH
AMPLDET NFESFLSENYPVFNFFAPWCIWCRRLPEPTWEAMAEEVERLNREVEQVDERSTS IDVDVVKVDC
VANRNL CGTQRIQAFPTLRFFKDAQY GIDYKQDRTVAAVDFLQKQVELEKT MEDDWHPRRQRMLEIKEH
PGCMVSGHVLVNRVPGNFHIEARSLHHLNNAAMTNLSHVVNHLVSGTPLAKDMQRKVSYPQFQSVHPLDG
GIFVSRDYHQVHHHYSKVVSTHFEVGGMMTKSREIVGYQMLAQSQIMHYNEMDVPEAKFSYDLSPMAVLVS
SKGRRWYDFVTSVCAIIGGTFTVVGIVDAVLYKIIKGGKQL

NCBI Reference Sequence: XP_009040131.1

>A.anophagefferensPDI-C3

MSGGLKVIDFFRKIPADLTEATVVGATLSITAGVFMAILFVVELWAFLLSTTIETGVMLDTNAETLLRINFNV
TMLDLRCDYAAVDVVDVLTNSMNVTKNVEKWQLDETGKRMI FQGRNREQKAIQHDAHHPEIQELHKNGVH
AVPLDEANFD MYLSENYPVFNFFAPWCIWCRRLPEPTWEATAEEEVERLNENENES IDVDIVKVDCVANRNL
CGTQRIQAFPTLRFFKDSQQY GIDYKQDRTVSAMI DFLKQKVELEKT MEDDWHPRRQRMLEIKEH
PGCMVSGHVLVNRVPGNFHIEARSLHHLNNAAMTNLSHIVNHLVSGTPLARDLQRKVSYPQFQSAHPLDGGSF
INR DYHQAHHHYSKVVSTHFEVGGMMTKTHEIIGYQMLSQSQVMHYNEMDVPEAKFSYDLSPMAVLVSSKGRW
YDFVTSVCAIIGGTFTVVGIVDAVLYKIIKGGKQL

GenBank: CBN74236.1

>E.siliculosusPDI-C1

MPTIKTFDFYRKIPLDLTETTLQGAVMSGCALFCMLILFLCELRAFLTPEVYTTVAIDSNQDSKLRINFN
ITMLALPCDYASVDVLDLLGTNKNVMTQNIVKWHTDENGVKREFHGRNKAQEMVKHDDHHRDLDLAHDG
EHAVPLTSSNFKDFIQGNDNMVDFPAPWCVWCIKLAPTWEAFAEEVERDASLNGKLMVAVDCVEEREL
CSTQNLMAFPTIRYFKGGVQDGTDYSDRSVTSLSVQYQAKVGGDEKALRRYGRLLKQDYPGCQLSGFIMV
NRVPGNFHIEARSALHSIDPTAANISHVVKTLKFGTQVPVRGRRVIESGVELEGLPALEDRVYSIDSLHT
APHHYIKVVSTFVGGGLAKTDNLQYQMMVSSQTMPYEQDQVPEAKFSYDLSPMSVHIKQRRRKWYDFLTSV
LAIVGGTFTVVGVLNLDNIFRVVVKQKKI

GenBank: CBN74492.1

>E.siliculosusPDI-C2

-----MGAWRLLDLYPKIPTD
LSQSTAVGGWFSTLTGVIMLLLFQVELFSFMSAPIESQVVVDNVLETKLQINFNMSFLDLPCEYLSVDAL
DVLGSNRVNIITGKEVQKWHLDPOGVKQAFHGRNRQQRDIVQFDEGVVASLQDLHEDGVHAAVLTEENFDT
WLEHDFTFVAFHAPWCWCQRLMPTLEVLAEVLEESQRGITVGTVDCTTQQNLCTKRFPVRAFPTLKL
NEEKLLKPDYSGDRTVEAFSTYLYSKADGKPKMKHQKGRKGFPEVGLHDDKWP GCMVTGHIMVNRVPGNF
HIEAASKSHTFHGATTNLSHIVHMSFGNDPPRRTQTkinRLTEDLRQNAPLDGNVYVANAYHQAPHHYL
RVVGS MYHLS PMKTPWHGYQIVANSQMMLYDEEEVPEARFSYNI SPMSVLVRSEKRPWYDFVTKVLAIVG
GTFSMVGLVDAAVFRASRKAGRQLS

GenBank: EWM21843.1

>N.gaditanaPDI-C1

MSSKRPSARGMDLYRRVPADLTETSTLGGLSIVAGVFMVALFIVELISFMSHRTETMVVLDHSHDQLIQ
INFNVTMLDLPCRYAVVDVLDVLTGNRMNVSKNIEKWNLDQAGRRRYFQGRNREERSILHDEHHGALEVL
LQNGEHAVPLAADSDFEYLESNEFTFVSFYAPWCICQRLAPTWEAFAEHVEEAQIPVKVAKIDCVTHAQ
LCRDQKVHAFPTLRMFNRARPLPPDYNTDRTLVALTSFVTRKLAVEEKKKSWPERDQEYVEHPGCMLSGH
LLVNRVPGNFHIEARSVHNLNAAMTNLSHVVNHL SFGPLYDSQVLSRLERFSSEFYVSNALDGRDFVLE
EPHKAHHHYLKVVGTLYEVP MRWGRADMLTYQMLPETSMTYGLDEVPEAKFSYEVSPMAVIVKKTGRRW
YEFVTS LCGILGGTFTVVGLLDSTLHRL LKPSNLQS

GenBank: EWM21113.1

>N.gaditanaPDI-C2

MAPVSSRGIKSDFYRKVPLDLTEATWHGGLVLSILAILFMLSFLVVELSSFIASSTHSTVVVDFNRDQOI
RINFNITMLDVPCEFATVDVLDVLTGNQNVTKNIEKWNLDQNAQR RMFQGRNREQRDLVHDDHHPALDL
AHQDGEHALPLGKDDFAGFVAGQEYVFANFYAPWCVWCQRLAPTWEAFAEALERQQFNKVVKIDCVEHR
DLCAESVIRAFPTLRLYKAGKAISP DYREDRTVEALTSYIERTLDLHAKVASSAPEHREKIERTLFAEAE
HPGCLLSGFLLVNRVPGNFHIEARSKYHNLNPTLTNVSHVVDLTFGPPVTREYREKLALLPKGFQQTRS
PLADQVYVVS KVHAFHHY LKVVSTHYEVSRTFGGQKSTVLQYQMVANSQVMHYQDDEVPEAKFSYDISP
LATVISSKKRAWYEF L TSLMAI IGGTFTVLGLLDHMLGKVLKPKKM

NCBI Reference Sequence: XP_002182871.1

>P.tricornutumPDI-C1

MSSVDFYRRVPKDLTEATSLGAIMSVCALVVMGVFLSETAAAFARTGIATSITLDENTSPQIRLNFNITL
TDLQCDYVSIDVWDALGTNKQNVTKNIDKWQLDAQGIRRI FSGRNREGREVVHDSHDRSLDEIHS EDGKA
VVDLTADTFDDFMEEHMAFVDLYAPWCVWCQRLAPTWELFAQE VKKEGMPIGVAKIDCMAEADLCRAQR
VMAFPTLRWYHEGKAVAPDYKMDRTIPALTSFAKRKLDMEKFKEWHSKASDSADPAEVEKKRQLYQQNR
PDHPGCQVSGHLMVNRVPGNFHLEAKSKSHNLNAAMTNLSHVVNHL SFGEPIDENNRKSKRILKQVPEEH
RQFAPMDGQAF LTKAFHQAFHHYIKVVSTHLNMGSSDANSMLTYQFLEQSQIVFYDDVNVPEARFSYDLS
PMSVVVEKEGRKWYDYL TSLCAI IGGTFTTLGLIDATLYKVLKPKKL

NCBI Reference Sequence: XP_002177433.1

>P.tricornutumPDI-C2

MVAPAWAGRVDMYRKVPADLMEGSKSGSYFSYFAVAGMLLLFLMESSEFFAKKLVTDLALDSNKDPRVRL
NFNITLMDLRCEYAVVDVSVLGTEQNVSSHITKWGVDAEGVRKRYAGRNDQKDIKMFDSVTSTIEEL
YSDGEDAVSLDEETLEYALRDQQYLFVDFYASWCSHCALAPTWETLAEVMSDVAEDLVEQHDHEYSEEE
YEHAKKVEMPMIAKIDCVLHKQVCMKQGILGYPTLRLFVDGERWKGGDYRGDRTVVAFADWLQQVEDAH
KTDTENSSAKNVQLAHMAAKDRLDSEDEGSDEEHEWAEKVKRHKQRLHHSWVDAEHPGCNIAGHLLLDLDRV
PGNFHIQARSPHDLVPHMTNVSHVVHLSIGEPVAERLIEQEKVILPEDVVKRKLKPMNGNAYVTKELHE
AYHHYLKVVITTNVDGLKFGKRDRLRAYQILQSSQLSFYRNDI IPEAKFVFDLSPVAVSYRTTSRRWYDYFT
SILAIIGGTFTVVGLLESTIHATVARKRY

NCBI Reference Sequence: XP_002899237.1

>P.infestansPDI-C1

MGAVDVLKKWDFYKKIPEDLTVSTLPGVSLSIAGCFIMFLLFILEFNLSYLTVDYKYDIVMDEGLDQTMRI
NFNITVPLDPCFASVDVSDMTGTRKHNMTSDIFKIRLDQKGRMVGLAETQVMRFAEDTEYGDLPDS
ATVTILDEESFEPFLKQHYYAVDFYAPWCVWCKRLEPVWTRVAKTLPSTLHYGQQLRVASVDCQAHPLC
MKQFIRAYPSILFYKGDVSPVEMYFGDRTVEAFVDFKFKQLMAGEMDVVEARKKELFEQDKKDAREQGRA
IARSAVGPEGCRLFGHLYVVRVPGNFHVLNANPAYSMDSSLVNASHTVNELWFGHEHLAPGMSRLPREAQ
TQLYTHRLENQDFTSLYKNHTYVHYIKVVTNSYVQGDGSEINVIKYTAHSNEYLETDDLPSVMFRYDLSP
MSVRISEDTVFPYHFVTSACAIIGGVFTVIGIVDQIIHQ TARALNKKVL

NCBI Reference Sequence: XP_002899938.1

>P.infestansPDI-C2

MAKFDFFRHVPEDLKVHTYSGSFFSLLSFAIMGLLLITHWEAYRDQSTKTTVVMDEHQEDRLRVNFVSL
LNVPCSVASVDLEDHMGQRFTNLTRHIRHFRLGADRSSNEVQRLDEVVIDNHEKGI PVWGGVHRDTKGAN
VHYSTPLTTKNFDDFMAKYELVLVNFYAPWCPFCHQLHPEWERAQAQLPDHPEYSEMVRMASVDCDTPDA
VWLCRRRAHIRAFPSMLIYMYGSTSTRYIYNGPRKTEHLLQFLDLFFRLEPDADFAEEVNVNNDRLGLPL
PVRVSOENLEGIDFKRRPSSTIQTGAVEGCEISGSI SVNRVPGVLVFTARSDDVSFNAQAIDVSHVVNH
FSFGQVRRTENLLSGDNHVLAAAPSNRFPLDRKIYTIENENVTVQHFMNVVGFQDNQDNTRKTHLQQRSYEFS
ASTTQYEDQTPSALFTFDISPLVVQITTDNIPFYHFITHLCAVIGGVFTILSLVDSGVFHAMNSIKKKQOL
GKLS

GenBank: ETI48787.1

>P.parasiticaPDI-C1

MGAMDVLKKWDFYKKIPEDLTVSTLPGVSLSIAGCFIMFLLFILEFNLSYLTVDYKYDIVMDEGLDQTMRI
NFNITVPLDPCFASVDVSDMTGTRKHNMTSDIFKIRLDQKGRMVGLAEEETQVMRFAEDTEYGDLPESD
ATVTILDEESFEPFLKEHHYAVDFYAPWCVWCKRLEPVWTRVAKTLPSTLHYGQQLRVASVDCQAHPLC
MKQFIRAYPTILFYKGDVSPVEMYFGDRTVEAFVDFKFKQLMAGEMDAVEARKKELFEQDKKDASEQGRA
IARSAVGPEGCRLYGHLYVVRVPGNFHILNANPAYSMDSSLVNASHTVSELWFGHEHLAPGMSRLPRDAQ
TQLYTHRLEDNQDFTSFYKNHTYVHYIKVVTNSYVQSDGSEINVIKYTAHSNEYLETDDLPSIMFRYDLSP
MSVRISEDSVFPYHFVTSACAIIGGVFTVIGIVDQIIHQ TARALNKKVL

GenBank: ETI36765.1

>P.parasiticaPDI-C2

MAKFDFFRHVPEDLKVHTYSGSFFSLLSFAIMGLLLITHWEAYRYQSTKTTVVMDEHQEDRLRVNFVSL
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VHYSTPLTTKNFDDFMAKYELVLVNFYAPWCPFCHQLHPEWERAQAQLPDHPEYSEMVRMASVDCDTPDA
VWLCRRRAHIRAFPSMLIYMYGSTSTRYIYNGPRKTEHLLQFLDLFFRLEPDADFAEEVNVNNDRLGLPL
PVRVSOENLEGIDFKRRPSSTIQTGAVEGCEISGSI SVNRVPGGLVFTARSDDVSFNAQAIDVSHVVNH
FSFGQVRRTENLFKGGSHMLAAPSNRFPLDSKMYTIESENVTVQHFLNVVGFQDNQDNTRKTHLQQRSYEF
SATTQYEDKTPSALFTFDISPLVVQITTDNIPFYHFITHLCAVIGGVFTILGLVDSGVFHTMNSIKKKQ
QLGKLS

NCBI Reference Sequence: XP_008607386.1

>S.diclinaPDI-C1

MGAMDTLKKWDFYKKIPEDLTVSTLPGVSLSLVGCIFIMFVLFILFNLSYLSVNYRYDIVMDEGLDEMARI
NFNITVPLDPCFASIDVSDMTGTRKHNMTKDIYKIRIDSKRRILGMSAEEQMPAYADDSVYGDLPESD
AVVTMLDEATFEPFLKEHHYAVDFYAPWCICQRLPEVWVRTAKTLPSTLHMGQRMRVASVDCQAHPELC

MTQFIRAYPTIMFYKDGDLSPVEMYHGDRSVEAFTEKFRSLFEGEADYAEQRKKEMHESDKKEAATKGEI
IAKAPGAEGCQLYGHLYVVKRVPGNFHVHLQNPAYSMDASLVNASHTVGELWFGPEVVPYNDLVRLPKDAHA
KLYSHRLEGKEFTAYHKEHTYVHYIKVVTNSYVQSNDDVINVKYKTAHSNEYEEKDDLPSIMFRYDLSPM
SVKISEDSVPPFYHFLTSACAIIGGVFTVIGILDQIIHQTVRAMNKKVL

NCBI Reference Sequence: XP_008604596.1

>S.diclinaPDI-C2
MAPRFDFFRKIPEDLQTSSTGTSFTTITTVVVMFYLVIAEYAAAYLASSSRTVSRVVMDSHQEDLLRINFN
ISLTSIPCHHVSVSDVSDHMGQRFANITRHIRRFELTDEGGSTVRGEEVLMADPSSVQRWGAVTHELHDGE
TVTPSLNDATFDEFMAKYELVLVNYAPWCPFSQALLPIWEQALQLODHPEYSERVMTARVDCQDNAV
SLCRRARIHAFPSMMIYMYGHTFTRYIYNGPRNAESLLLFLDLFYRRLNPDGDFAEVEVPEFGDLLRLAA
PQNEEHDDHDEGCELSGSIQVQVPGKLVLYPYSQDQSFDMRDINVTHTINHFSFGQWKSTEQRMNPNRA
VLSTHYPMDAKHYRALDSNITIEHYIKIVGVDHMDTISFLHQIPERMYEFSASSNQYNATNQVPAALFTY
DSSPLVIELYQSMPPFRFLTSLCAIVGGVYTVLGLVDAGVFHAVTSVQRKAKLGKLI

NCBI Reference Sequence: XP_012193854.1

>S.parasiticaPDI-C1
MGAMDTLKKWDFYKIPEDLTVSTLPGVSLSLVGCIFIMFVLFLEFNSYLSVNYRYDIVMDEGLDEMMRI
NFNITVPLRCEFASIDVSDMTGTRKHNMTKDIYKIRIDSKRRI LGMSAEEQPMPVYADDSVYGLPESD
AVVTMLDEATFEPFLKEHHYVAVDFYAPWC IWCQRLEPVWVRTAKTLP TLHMGQRM RVASVDCQAHPELC
MTQFIRAYPTIMFYKDGDLSPVEMYHGDRSVEAFTEKFRSLFEGEADYAEQRKKEMHESDKKEAATKGEI
IAKAPGAEGCQLYGHLYVVKRVPGNFHVHLQNPAYSMDASLVNASHTVGELWFGPEVVPYNDLVRLPKDAHA
KLYSHRLEGKEFTAYHKEHTYVHYIKVVTNAYVQSNDDVINVKYKTAHSNEYEEKDDLPSIMFRYDLSPM
SVKITEDSVPPFYHFLTSACAIIGGVFTVIGILDQIIHQTVRAMNKKVL

NCBI Reference Sequence: XP_012197035.1

>S.parasiticaPDI-C2
MAPRFDFFRKIPEDLQTSSTGTSAFFTITTVVVMLYLVIAEYAAAYLASSSRTVSRVVMDSHQEDLLRINFN
ISLTSIPCHHVSVSDVSDHMGQRFANITRHIRRFELTDEGGSTVRGEEVLMADPNSVQRWGAVTHELHDGE
TITPSLNDATFDEFMAKYELVLVNYAPWCPFSQALLPIWEQALQLODHPEYSERVMTARVDCQDNAV
SLCRRARIHAFPSMMIYMYGHTFTRYIYNGPRNAESLLLFLDLFYRRLNPDGDFAEVEVPEFGDLLRLAA
PQNEHDHDEGCELSGSIQVQVPGKLVFYYPYSQDQSFDMRDINVTHTINHFSFGQWKSTEQRMNPNRA
VLSTHYPMDAKHYRALDSNITIEHYIKIVGVDHMDTISFLHQIPERMYEFSASSNQYNATNQVPAALFTY
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NCBI Reference Sequence: XP_002287517.1

>T.pseudonanaPDI-C1
MAPFIANLDMYRKVPVDLLEGTRRGSILSTIAIFTMTTLFFLETKAYFSSTLATSALDSNSDPNIRVNF
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DGEDAISLDETTLNVALQENTYVVFVDFANWC SHCRDLAPTWETLAEVMYEAESRVEEHLERNPDHHYS
DEDYEEAVK VQLPVMIGKIDCVDHGGLCQRMQIQAYPTLKFVVDGEEEMGDYRGHRTVIEMAHFIAEMEKT
HKGKGGVAQDATE IASDRTIQTKEHEDYARALSASRHHIKHSWHDDEHPGCQISGFLLVDRAPGNFHIQA
QSKGHDLA AHMTNVSHIINHLSFGKPF SKYFLKDG LKNTPPGFLETTKPF DGNVYITQNEHEAHHHYLKV
ITTEFEPEKGAQNSKYNKKEPSRAYQILQSSQLSLYRSDIVPEAKFTYDLSPIAVSYNKKYRHWDYDFTS
LMAIIGGTFTTVGMLESIGHSVSSKKRR

NCBI Reference Sequence: XP_002295231.1

>T.pseudonanaPDI-C2
MNNISGPGRRSAMSSVDFYRRVPKDLTEATSLGAIMSI CAITVMAILFFSETLAFARTAMVTSIALDEND
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TLEELHEDGEQAVELHPENFKAFLEGHDMAFIDMYAPWC IWCQRLHPTWEKFGKVEHELGMVGVGKVD
VVHAQLCKDEKVMFAPTLRWYKDGEAILPDYKMDRTVDALVGYAKRKLDMEQKYKDWE SKNAGGNADARG
KPRGGTSRPEHPGCQVSGHLMVNRVPGNFHIEAKSVNHNLNAA MTNLTHRNVNLSFGEPITKLP PHMENT
PFMRKVKRVLKQVPEEHKQFNPMDDTEYVTAQFHQAFHHYIKVVSTHLNMGSSSKSEYSVNDVNAVTVYQ
MLEQSQIVFYDEVNVPEARFSYDMS PMSVVVQKEGRKWDYDLTSLCAIIGGTFTTLGLIDATLYKVKFKP
KL

NCBI Reference Sequence: XP_002295232.1

>T.pseudonanaPDI-C3

MYGDINGGGRRRAVGTADLYRHVPKEITE-----ATKIGVVMSLLSIFIM
ILLFFCETYAFSRSTISSSTIAVDPNSEQLLRNLFNVTLYDLHCDYASVDIWDTLGTNQQNITKDIVKWNL
DDQGQRKKFAGRNAEQRAVTHEEHDETLQDLADALGGELHAVALDPESIVEFHKRHNGQAIIDFYAPWCI
WCQRLEPTWEKFARQVSDERINLGVGKVCVTHAQLCKDQRVMAFP TLRWFENGKAVMPDYRGDR TVDAL
VDYAKRRVGSNEGSNDEEFEEEDHHPGCLISGHLMVNRPGRFQIEARSVNHELHSAMTNLTHRVDLTFG
ALSGPPGHMLHVL PFFDTVPEKYKHTNPMQDKYYPTYEFHQAFHHHLKIISTHIDYLF SRSTVLYQILEQ
SQLVFYEEVNVPEIQFSFDLSPMSVNVNSKEGRKWYEYVTSLCAIIGGTYTTLGLINATLLRIFKPKKL