

Supplementary Material

Calcium signalling in oomycetes: an evolutionary perspective

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Supplementary Table 2: Homologues of Oomycete PKDRR channels

Acc. No	Name	Species	Taxonomic Grouping	E-value	% ID	Length (aa)	Domain Structure	Notes
XP_002909214.1	Pinfestans_PKDRR1	Phytophthora infestans	Oomycetes	0	100	1293	PKD_R_R	2e-32/32% ID vs Hsapiens RyR2
XP_008901315.1	Pparasitica_PKDRR1	Phytophthora parasitica	Oomycetes	0	94	1334	PKD_R_R	
XP_009523932.1	Psojaje_PKDRR1	Phytophthora sojae	Oomycetes	0	87	1305	PKD_R_R	PKD = PKD channel domain
CCAI5061.1	Alabachii_PKDRR1	Albugo laibachii	Oomycetes	0	53	1166	PKD_R_R	R = ryanodine receptor domain
CCIA4400.1	Acandida_PKDRR1	Albugo candida	Oomycetes	0	53	1232	PKD_R_R	
XP_008611403.1	Sidicina_PKDRR1	Saprolegnia diclina	Oomycetes	0	48	1341	PKD_R_R	
XP_012197723.1	Sparasitica_PKDRR1	Saprolegnia parasitica	Oomycetes	0	47	1318	PKD_R_R	
XP_008863215.1	Ainvadans_PKDRR1	Aphanomyces invadans	Oomycetes	0	43	1358	PKD_R_R	
XP_009843939.1	Aastaci_PKDRR1	Aphanomyces astaci	Oomycetes	0	42	1377	PKD_R_R	
XP_008872786.1	Ainvadans_PKDRR2	Aphanomyces invadans	Oomycetes	0	42	1245	PKD_R_R	
XP_009832416.1	Aastaci_PKDRR2	Aphanomyces astaci	Oomycetes	0	42	1245	PKD_R_R	
CCIA9325.1	Acandida_PKDRR2	Albugo candida	Oomycetes	3.00E-70	26	1376	PKD_R_R	
CCAI7841.1	Alabachii_PKDRR2	Albugo laibachii	Oomycetes	1.00E-68	25	2549	GatB_PKD_R_R_SugarTrans	GatB = galactose binding
XP_002908895.1	Pinfestans_PKDRR2	Phytophthora infestans	Oomycetes	2.00E-47	27	1420	PKD_R_R	SugarTrans = sugar transporter
XP_009528777.1	Psojaje_PKDRR2	Phytophthora sojae	Oomycetes	3.00E-46	28	1401	PKD_R_R	
XP_009832765.1	Aastaci_PKDRR3	Aphanomyces astaci	Oomycetes	1.00E-45	34	880	PKD_R_R	
XP_008868534.1	Ainvadans_PKDRR3	Aphanomyces invadans	Oomycetes	1.00E-45	34	1248	PKD_R_R	
XP_009835764.1	Aastaci_PKDRR4	Aphanomyces astaci	Oomycetes	4.00E-45	34	1251	PKD_R_R	
XP_012193958.1	Sparasitica_PKDRR2	Saprolegnia parasitica	Oomycetes	6.00E-45	34	1231	PKD_R_R	
XP_008607279.1	Sidicina_PKDRR2	Saprolegnia diclina	Oomycetes	7.00E-45	34	1231	PKD_R_R	I = IP3 binding
ETI47942.1	Pparasitica_PKDRR2	Phytophthora parasitica	Oomycetes	9.00E-45	26	1386	PKD_R_R	M = MIR domain
XP_004342590.1	Cowczarskii_RyR	Capsaspora owczarskii	Ichthyosporae	1.00E-36	34	6625	I_M_H_S_S_R_R_S_H_H_R_R_A_C	H = ITPR/RyR homology domain
CD530480.1	Hmncrostoma_PKD	Hymenolepis microstoma	Platyhelminthes	1.00E-36	25	796	PKD	S = SPRY domain
XP_008758621.1	Rnorvegicus_PKD21	Rattus norvegicus	Chordata	3.00E-36	26	763	PKD	A = H associated domain
XP_005160146.2	Drerio_PKD2	Danio rerio	Chordata	3.00E-36	26	927	PKD	
KOF67457.1	Obimaculoides_PKD	Octopus bimaculoides	Lophotrochozoa	7.00E-36	26	780	PKD_EFh	EFh = EF-hand
XP_002119742.1	Citrenetis_PKD2	Ciona intestinalis	Chordata	1.00E-35	24	887	PKD_EFh	
GAA37006.2	Csinensis_PKD2	Ctenorhynchus sinensis	Platyhelminthes	3.00E-35	28	782	PKD	
XP_011975116.1	Mouton_PKD2	Ovis aries musimon	Chordata	6.00E-35	25	773	PKD	
XP_009954787.1	Ldiscolor_PKD21	Leptosomus discolor	Chordata	7.00E-35	26	844	PKD	
XP_013762742.1	Ttrahens_PKD2	Thecamonas trahens	Apusozoa	1.00E-34	24	832	PKD	
XP_006018170.1	Asinensis_PKD2	Alligator sinensis	Chordata	3.00E-34	26	765	PKD	
H2LURU7.2	Olatipes_PKD2	Oryzias latipes	Chordata	4.00E-34	25	901	PKD	
XP_012999134.1	Cporcellus_PKD21	Cavia porcellus	Chordata	5.00E-34	26	766	PKD	
XP_011194256.1	Bucurbitae_PKD	Batrachoseps cucurbitae	Ecdysozoa	6.00E-34	28	632	PKD	
XP_009303777.1	Drerio_RYR1	Danio rerio	Chordata	8.00E-34	35	5063	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
NP_001246206.1	Dmelanogaster_RYR	Drosophila melanogaster	Ecdysozoa	1.00E-33	35	5115	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_012989794.1	Elucius_RYR1	Esax lucius	Chordata	2.00E-33	35	5076	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_004911138.1	Xenopus_PKD2	Xenopus (Silurana) tropicalis	Chordata	2.00E-33	26	946	PKD_EFh	
XP_008500272.1	Culex_PKD21	Culex quinquefasciatus	Chordata	2.00E-33	25	838	PKD	
XP_009557836.1	Ccanorus_PKD21	Culex canorus	Chordata	2.00E-33	26	795	PKD_EFh	
CDQ69555.1	Omykiss_RYR1	Oncorhynchus mykiss	Chordata	3.00E-33	35	4791	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007067623.1	Cmydas_PKD21	Chelonia mydas	Chordata	3.00E-33	26	853	PKD_EFh	
XP_005503700.1	Clivia_PKD21	Columba livia	Chordata	4.00E-33	26	648	PKD	
XP_005177530.1	Mdomestica_RYR	Musca domestica	Ecdysozoa	7.00E-33	35	5115	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_005805924.1	Xmaculatus_RYR1	Xiphophorus maculatus	Chordata	7.00E-33	35	5025	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_001657320.1	Aaegypti_RYR	Aedes aegypti	Ecdysozoa	9.00E-33	33	5118	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013118743.1	Scalcitrans_RYR	Stomoxys calcitrans	Ecdysozoa	1.00E-32	34	5124	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007437210.1	Pbivittatus_PKD2	Python bivittatus	Chordata	1.00E-32	27	763	PKD_EFh	
AHV02115.1	Bdorsalis_RYR	Batrachoseps dorsalis	Ecdysozoa	2.00E-32	34	5140	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007259518.1	Amexicanus_RYR1	Astyanax mexicanus	Chordata	2.00E-32	35	4720	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_012710791.1	Fheteroclitus_RYR1	Fundulus heteroclitus	Chordata	2.00E-32	35	5082	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013127750.1	Oniloticus_RYR1	Oreochromis niloticus	Chordata	2.00E-32	35	5142	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013766921.1	Pnyererei_RYR1	Pundamilia nyererei	Chordata	2.00E-32	37	5072	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_006800442.1	Nbrichardi_RYR1	Neolamprologus brichardi	Chordata	2.00E-32	37	5078	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_012778144.1	Mzebra_RYR1	Melanostomus zebra	Chordata	2.00E-32	37	5090	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
AA858117.1	Nmigricans_RYR1	Makaira nigricans	Chordata	2.00E-32	37	5081	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_004527513.1	Ccapitata_RYR	Ceratitis capitata	Ecdysozoa	3.00E-32	34	5128	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_001370448.1	Mdomestica_PKD2	Monodelphis domestica	Chordata	3.00E-32	25	997	PKD_EFh	
XP_005285696.1	Cbellii_PKD21	Chrysemys picta bellii	Chordata	3.00E-32	26	853	PKD_EFh	
XP_007562016.1	Pformosa_PKD2	Poecilia formosa	Chordata	3.00E-32	26	891	PKD	
KDR20220.1	Znevadensis_PKD2	Zoetermopsis nevadensis	Ecdysozoa	3.00E-32	23	611	PKD	
XP_01377532.1	Lpolypheum_PKD2	Limulus polyphemus	Ecdysozoa	4.00E-32	27	716	PKD_EFh	
XP_011609906.1	Trulripes_RYR1	Tokifia rubripes	Chordata	5.00E-32	34	5080	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007552444.1	Pformosa_RYR1	Poecilia formosa	Chordata	5.00E-32	36	5060	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013178493.1	Pxuthus_RYR	Papilio xuthus	Ecdysozoa	5.00E-32	35	5136	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
AKN21732.1	Smediterranea_PKD21	Schmidtea mediterranea	Platyhelminthes	6.00E-32	23	785	PKD_EFh	
AER23554.1	Pxystella_RYR	Plutella xylostella	Ecdysozoa	6.00E-32	33	5117	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
ETN61080.1	Adarlingi_RYR	Anopheles darlingi	Ecdysozoa	6.00E-32	33	5004	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011420728.1	Cgigas_PKD21	Cassista gigas	Lophotrochozoa	7.00E-32	25	851	PKD_EFh	
KKF17507.1	Lcrocea_RYR2	Larimichthys crocea	Chordata	7.00E-32	36	5049	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_003742171.1	Moccidentalis_PKD2L	Metaseius occidentalis	Ecdysozoa	1.00E-31	25	781	PKD_EFh	
XP_008294801.1	Spartitus_RYR1	Stegastes partitus	Chordata	1.00E-31	37	5075	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_002718661.1	Oocinulus_PKD21	Oryctolagus cuniculus	Chordata	1.00E-31	26	779	PKD	
XP_00795522.1	Xmaculatus_PKD21	Xiphophorus maculatus	Chordata	1.00E-31	26	753	PKD_DUF4546	DUF = domain of unknown function
XP_012408408.1	Sharrisii_PKD2	Sarcophilus harrisii	Chordata	1.00E-31	25	981	PKD_EFh	
XP_005932417.1	Hburtini_PKD2	Hoplochromis burtini	Chordata	1.00E-31	35	902	PKD_EFh	
XP_012544761.1	Bmorii_RYR	Bombyx mori	Ecdysozoa	1.00E-31	32	5123	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009320668.1	Padelliae_PKD21	Pygocelis adelphe	Chordata	1.00E-31	27	852	PKD_EFh	
XP_010122964.1	Cmacqueeni_PKD21	Chlamydomonas macqueeni	Chordata	1.00E-31	26	852	PKD_EFh	
EFX89429.1	Dpulex_RYR	Daphnia pulex	Ecdysozoa	1.00E-31	35	5119	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_005444573.1	Fcherrug_PKD2	Ficaria verna	Chordata	2.00E-31	26	780	PKD_EFh_SOAR	STIM Orai1 activator region
XP_010154109.1	Ehelias_PKD2	Eurypterus helias	Chordata	2.00E-31	26	851	PKD_EFh	
XP_013814258.1	Amantelli_PKD21	Apterix australis mantelli	Chordata	2.00E-31	26	852	PKD_EFh	
XP_013151587.1	Fperegrinus_PKD2	Falco peregrinus	Chordata	2.00E-31	26	753	PKD_EFh_SOAR	
KFB47317.1	Asinensis_RYR	Anopheles sinensis	Ecdysozoa	2.00E-31	33	5077	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_010561830.1	Hleucocephalus_PKD21	Haliotis leucocephalus	Chordata	2.00E-31	26	851	PKD_EF	
ETZ9829.1	Tcastaneum_RYR	Tribolium castaneum	Ecdysozoa	2.00E-31	33	4986	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_012679517.1	Charengus_RYR1	Culex hargreavesi	Chordata	3.00E-31	35	5072	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_003452262.1	Oniloticus_PKD2	Oreochromis niloticus	Chordata	3.00E-31	26	902	PKD_EFh	
XP_005025282.1	Aplatyrhynchus_PKD2	Anas platyrhynchos	Chordata	3.00E-31	26	852	PKD_EFh	
XP_013056948.1	Adomesticus_PKD21	Anser cygnoides domesticus	Chordata	4.00E-31	26	863	PKD_EFh	
XP_009943885.1	Ohoazin_PKD21	Opisthocomus hoazin	Chordata	4.00E-31	26	844	PKD_EFh	
AAI16298.1	Mmusculus_PKD21	Mus musculus	Chordata	4.00E-31	25	760	PKD_EFh	
XP_010410343.1	Ccornix_PKD21	Corvus cornix cornix	Chordata	4.00E-31	26	779	PKD_EFh_SOAR	
XP_011662382.1	Spurpuratus_PKD21	Strongylocentrotus purpuratus	Echinodermata	4.00E-31	24	907	PKD_EFh	
XP_010131522.1	Bsilvestris_PKD21	Buceros rhinoceros silvestris	Chordata	5.00E-31	26	844	PKD	
AKC03558.2	Csuppressalis_RYR	Chilo suppressalis	Ecdysozoa	5.00E-31	34	5133	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_008639484.1	Cbrachyrhynchus_PKD2	Corvus brachyrhynchus	Chordata	5.00E-31	26	762	PKD_EFh_SOAR	
ELT90189.1	Cteleta_PKD	Capitella teleta	Lophotrochozoa	4.00E-31	24	776	PKD_EFh	Edited search excluding oomycetes, chordata and ecdysozoa
BAB84714.1	Hemicentrus_RYR	Hemicentrus pulcherimus	Echinodermata	4.00E-30	34	5317	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
CD59582.1	Smansoni_RYR	Schistosoma mansoni	Platyhelminthes	2.00E-30	31	4998	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
CE098110.1	Pbrassicae_PKD	Plasmodiophora brassicae	Rhizaria	2.00E-29	25	702	PKD	
XP_013419430.1	Langina_PKD2	Lingula anatina	Lophotrochozoa	2.00E-29	24	852	PKD_EFh_OmpH	Outer membrane protein H
ELT95828.1	Cteleta_RYR	Capitella teleta	Lophotrochozoa	2.00E-29	31	5038	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013386043.1	Langina_PKD112	Lingula anatina	Lophotrochozoa	6.00E-29	22	1225	GPS_PLAT_PKD	Latrophilin/CL-1-like GPS domain_PLAT/LH2 domain of polycystin-1 like proteins
CD534291.1	Hmicrostoma_RYR	Hymenolepis microstoma	Platyhelminthes	6.00E-29	32	5717	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009173549.1	Oviverrini_RYR	Opisthorchis viverrini	Platyhelminthes	8.00E-29	30	5727	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_005098719.2	Acalifornica_PKD21	Aplysia californica	Lophotrochozoa	5.00E-28	26	883	PKD_EFh	
XP_013090208.1	Bglabrata_PKD21	Biophalaris glabrata	Lophotrochozoa	8.00E-28	26	698	PKD	
XP_009175902.1	Oviverrini_PKD	Opisthorchis viverrini	Platyhelminthes	1.00E-27	27	707	PKD	
XP_001639086.1	Nvectensis_PKD	Nematostella vectensis	Cnidaria	4.00E-27	26	903	PKD_EFh	
XP_009059256.1	Lgigantea_RYR	Lottia gigantea	Lophotrochozoa	5.00E-27	32	5045	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009065053.1	Lgigantea_PKD	Lottia gigantea	Lophotrochozoa	6.00E-27	24	851	PKD_EFh	
XP_009164528.1	Oviverrini_PKD	Opisthorchis viverrini	Platyhelminthes	2.00E-26	24	1581	GPS_PLAT_PKD	
XP_012793502.1	Shematobium_PKD21	Schistosoma haematobium	Platyhelminthes	3.00E-26	28	720	PKD	
XP_013393030.1	Langina_RYR	Lingula anatina	Lophotrochozoa	4.00E-26	35	4715	I_M_H_S_S_R_R_S_H_H_R_R_A_C	
WP_033542974.1	Planococcus_R	Planococcus sp. CAU13	Firmicutes	8.00E-26	52	98	R	Bacterium
XP_002166908.2	Hvulgaris_PKD2L	Hydra vulgaris	Cnidaria	4.00E-25	24	684	PKD_OmpH	
WP_029326639.1	Bacillus_R	Bacillus sp. m3-13	Firmicutes	6.00E-25	56	95	R	Bacterium
CD018636.1	Prevotella_R	Prevotella sp. CAG-732	Bacteroidetes	2.00E-24	53	95	R	Bacterium
XP_005830615.1	Gtheta_PKD	Gaillardia theta	Cryptophyta	6.00E-24	25	749	PKD	
XP_006815503.1	Skowalevskii_PKD112	Saccoglossus kowalevskii	Hemichordata	7.00E-24	23	1233	PLAT_PKD	
WP_000323609.1	Bcereus_R	Bacillus cereus	Firmicutes	3.00E-23	54	94	R	CamK = calmodulin-dependent protein kinase

XP_002900460.1	Pinfestans_CamKRR	<i>Phytophthora infestans</i>	Oomycetes	2.00E-20	28	739	PH_CamK_R_R	Restricted search to P.infestans
XP_002904123.1	Pinfestans_PKD	<i>Phytophthora infestans</i>	Oomycetes	2.00E-15	26	924	PKD	
ET146053.1	Pparasitica_CamKRR	<i>Phytophthora parasitica</i>	Oomycetes	0.E+00	88	732	PH_CamK_R_R	BLASTed Pinfestans_CamKRR
XP_009526058.1	Psojae_CamKRR	<i>Phytophthora sojae</i>	Oomycetes	0.00E+00	80	755	PH_CamK_R_R	
XP_008613197.1	Sdclina_CamKRR	<i>Saprolegnia diclina</i>	Oomycetes	3.00E-139	37	692	PH_CamK_R_R	
XP_012208802.1	Sparasitica_CamKRR	<i>Saprolegnia parasitica</i>	Oomycetes	1.00E-132	38	820	PH_CamK_R_R	
XP_009832700.1	Aastaci_CamKRR	<i>Aphanomyces astaci</i>	Oomycetes	3.00E-126	34	727	PH_CamK_R_R	
CC145407.1	Alabachii_CamKR	<i>Albugo labachii</i>	Oomycetes	4.00E-124	34	770	PH_CamK_R	Only 1 Ryr domain
CC148190.1	Acandida_CamKR	<i>Albugo candida</i>	Oomycetes	3.00E-123	33	770	PH_CamK_R	Only 1 Ryr domain
XP_008871893.1	Ainvadans_CamKRR	<i>Aphanomyces invadans</i>	Oomycetes	6.00E-122	33	725	PH_CamK_R_R	
XP_002905287.1	Pinfestans_CamK	<i>Phytophthora infestans</i>	Oomycetes	7.00E-47	32	550	CamK	
ETK72490.1	Psojae_CamK	<i>Phytophthora parasitica</i>	Oomycetes	4.00E-46	33	551	CamK	
XP_009520373.1	Pparasitica_CamK	<i>Phytophthora sojae</i>	Oomycetes	2.00E-44	32	560	CamK	
XP_012194123.1	Sparasitica_CamK	<i>Saprolegnia parasitica</i>	Oomycetes	2.00E-41	31	471	CamK	
CC142902.1	Acandida_CamK	<i>Albugo candida</i>	Oomycetes	4.00E-41	30	507	CamK	
XP_008864535.1	Ainvadans_CamK	<i>Aphanomyces invadans</i>	Oomycetes	1.00E-39	31	476	CamK	
XP_010937001.1	Eguineensis_CamK	<i>Elaeis guineensis</i>	Viridiplantae	5.00E-38	29	391	CamK	
CC147689.1	Alabachii_CamK	<i>Albugo labachii</i>	Oomycetes	5.00E-38	29	504	CamK	
XP_008614206.1	Sdclina_CamK	<i>Saprolegnia diclina</i>	Oomycetes	7.00E-38	34	511	CamK	
EIE77546.1	Rdelemar_CamK	<i>Rhizopus delemar</i>	Fungi	2.00E-37	31	446	CamK	
EW25494.1	Ngaditana_CamK	<i>Nannochloropsis gaditana</i>	Eustigmatophyceae	1.00E-35	33	912	CamK	Non-oomycete Stramenopile
ETL46770.1	Pparasitica_PKD	<i>Phytophthora parasitica</i>	Oomycetes	0.00E+00	87	931	PKD	
XP_009537161.1	Psojae_PKD	<i>Phytophthora sojae</i>	Oomycetes	0.00E+00	82	938	PKD	
XP_012198419.1	Sparasitica_PKD	<i>Saprolegnia parasitica</i>	Oomycetes	3.00E-93	34	711	PKD	
XP_009842723.1	Aastaci_PKD	<i>Aphanomyces astaci</i>	Oomycetes	2.00E-92	30	754	PKD	
XP_008607890.1	Sdclina_PKD	<i>Saprolegnia diclina</i>	Oomycetes	3.00E-92	32	711	PKD	
XP_008879364.1	Ainvadans_PKD	<i>Aphanomyces invadans</i>	Oomycetes	3.00E-84	81	762	PKD	
XP_008773755.1	Rnorvegicus_RYR3	<i>Rattus norvegicus</i>	Chordata	1.00E-30	32	4877	L_M_H_S_S_R_R_S_H_H_R_R_A_C	stats vs Pinfestans_PKDORR1
XP_012017113.1	Mouton_RYR3	<i>Ovis aries musimon</i>	Chordata	3.00E-30	31	4872	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009293050.1	Dreio_RYR3	<i>Danio rerio</i>	Chordata	5.00E-31	31	4856	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_006018590.1	Asinensis_RYR3	<i>Alligator sinensis</i>	Chordata	5.00E-31	32	4872	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011490347.1	Olatipes_RYR3	<i>Oryzias latipes</i>	Chordata	2.00E-31	31	4838	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009558925.1	Ccanorus_RYR3	<i>Cyclus canorus</i>	Chordata	3.00E-31	32	4871	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007235325.1	Amexicanus_RYR3	<i>Astyanax mexicanus</i>	Chordata	1.00E-31	31	4850	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
NP_001076231.1	Oniculus_RYR3	<i>Oryctolagus cuniculus</i>	Chordata	3.00E-31	31	4872	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
A2AGL3.1	Mmusculus_RYR3	<i>Mus musculus</i>	Chordata	1.00E-30	32	4863	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
NP_114467.1	Rnorvegicus_RYR2	<i>Rattus norvegicus</i>	Chordata	5.00E-31	33	4953	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011980519.1	Mouton_RYR2	<i>Ovis aries musimon</i>	Chordata	2.00E-31	33	4975	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_009291295.1	Dreio_RYR2	<i>Danio rerio</i>	Chordata	2.00E-26	29	4880	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_006016436.1	Asinensis_RYR2	<i>Alligator sinensis</i>	Chordata	1.00E-31	33	4956	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011471845.1	Olatipes_RYR2	<i>Oryzias latipes</i>	Chordata	2.00E-32	33	4692	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_003473562.1	Cporcellus_RYR2	<i>Cavia porcellus</i>	Chordata	1.00E-31	33	4690	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007069077.1	Cmydas_RYR2	<i>Chelonia mydas</i>	Chordata	1.00E-31	33	5011	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_013224527.1	Clivia_RYR2	<i>Colobina livia</i>	Chordata	2.00E-31	33	4959	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_007244757.1	Amexicanus_RYR2	<i>Astyanax mexicanus</i>	Chordata	2.00E-26	28	4652	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
P30957.3	Oniculus_RYR2	<i>Oryctolagus cuniculus</i>	Chordata	1.00E-31	33	4969	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011242598.1	Mmusculus_RYR2	<i>Mus musculus</i>	Chordata	1.00E-30	33	4947	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_004993045.1	Srosetta_RYR	<i>Salpingoeca rosetta</i>	Choanoflagellida	3.00E-19	43	5340	L_H_S_S_S_H_H_R_R_C	
XP_002109077.1	Tadhaerens_RYR	<i>Trichoplax adhaerens</i>	Placozoa	3.00E-34	34	4949	L_M_H_S_R_R_S_H_H_R_R_A_C	WSC domain; This domain may be involved in carbohydrate binding.
XP_002110052.1	Tadhaerens_PKD	<i>Trichoplax adhaerens</i>	Placozoa	3.00E-26	25	2734	WSC_REJ_GPS_PLAT_PKD	REJ domain; The REJ (Receptor for Egg Jelly) domain is found in PKD1
AA231363.1	Hsapientis_PKD212	<i>Homo sapiens</i>	Chordata	1.00E-31	25	758	PKD	
NP_057196.2	Hsapientis_PKD211	<i>Homo sapiens</i>	Chordata	4.00E-31	25	805	PKD	
XP_006711866.1	Hsapientis_RYR2	<i>Homo sapiens</i>	Chordata	2.00E-30	32	4984	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_011520182.1	Hsapientis_RYR3	<i>Homo sapiens</i>	Chordata	3.00E-30	32	4859	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
XP_006723382.1	Hsapientis_RYR1	<i>Homo sapiens</i>	Chordata	4.00E-30	33	5027	L_M_H_S_S_R_R_S_H_H_R_R_A_C	
EW27927.1	Ngaditana_PKD	<i>Nannochloropsis gaditana</i>	Eustigmatophyceae	7.00E-07	28	718	PKD	Stramenopiles without Oomycetes
CEM13223.1	Vbrassicaformis_PKD	<i>Vitrella brassicaformis</i>	Alveolata	2.00E-33	24	937	PKD	Alveolates
EN78633.1	Otrifallax_PKD	<i>Oxytricha trifallax</i>	Alveolata	3.00E-19	28	1598	PKD_PKD	Alveolates
CDW80624.1	Slennae_PKD211	<i>Stylonychia lemnae</i>	Alveolata	2.00E-18	26	1624	PKD_PKD	Alveolates
XP_013252140.1	Eacervulina_PKD	<i>Eimeria acervulina</i>	Alveolata	1.00E-11	24	1502	PKD	Alveolates
XP_01022905.2	Tthermophila_PKD	<i>Tetrahymena thermophila</i>	Alveolata	1.00E-10	20	1469	TctB	Alveolates
ITPR homologs with identity to Hsapientis_ITPR1, searched with Pinfestans_ITPR1								
XP_002909590.1	Pinfestans_ITPR1	<i>Phytophthora infestans</i>	Oomycetes	0.00E+00	100	2916	H_H_A	
XP_009514398.1	Psojae_ITPR1	<i>Phytophthora sojae</i>	Oomycetes	0.00E+00	68	3001	H_H_A	
ETL44115.1	Pparasitica_ITPR1	<i>Phytophthora parasitica</i>	Oomycetes	0.00E+00	84	3789	L_M_H_H_A_FAM117	
XP_008878887.1	Ainvadans_ITPR1	<i>Aphanomyces invadans</i>	Oomycetes	0.00E+00	37	3037	L_M_H_A	
XP_012197373.1	Sparasitica_ITPR1	<i>Saprolegnia parasitica</i>	Oomycetes	0.00E+00	39	1873	A_C	
XP_009839519.1	Aastaci_ITPR1	<i>Aphanomyces astaci</i>	Oomycetes	0.00E+00	37	3199	L_M_H_A_PHA	
XP_008620853.1	Sdclina_ITPR1	<i>Saprolegnia diclina</i>	Oomycetes	3.00E-113	37	2913	L_M_H_A_C	
XP_008613183.1	Sdclina_ITPR2	<i>Saprolegnia diclina</i>	Oomycetes	2.00E-101	35	2216	H_A_C	
XP_009843560.1	Aastaci_ITPR2	<i>Aphanomyces astaci</i>	Oomycetes	6.00E-98	34	2845	L_M_H_A	
XP_008880167.1	Ainvadans_ITPR2	<i>Aphanomyces invadans</i>	Oomycetes	3.00E-93	34	2655	L_M_H_A_C	
CDW87570.1	Slennae_ITPR1	<i>Stylonychia lemnae</i>	Alveolata	4.00E-69	26	2894	L_M_H_H_A_C	
XP_008610948.1	Sdclina_ITPR3	<i>Saprolegnia diclina</i>	Oomycetes	9.00E-64	35	2786	L_M_A_C	
XP_001017190.2	Tthermophila_ITPR1	<i>Tetrahymena thermophila</i>	Alveolata	6.00E-63	24	2827	H_H_A_C	
EJY80876.1	Otrifallax_ITPR1	<i>Oxytricha trifallax</i>	Alveolata	1.00E-61	24	2724	L_H_H_A_C	
KOQ21485.1	Chrysochromulina_ITPR	<i>Chrysochromulina sp. CCMP291</i>	Haptophyceae	6.00E-57	24	3272	L_H_A_C	
XP_001014415.2	Tthermophila_ITPR2	<i>Tetrahymena thermophila</i>	Alveolata	9.00E-56	24	2860	L_H_H_A_C	
XP_008861937.1	Ainvadans_ITPR3	<i>Aphanomyces invadans</i>	Oomycetes	2.00E-55	27	2697	L_H_H_A_C	
XP_009827762.1	Aastaci_ITPR3	<i>Aphanomyces astaci</i>	Oomycetes	2.00E-55	27	2703	L_H_H_A_C	
XP_009827764.1	Aastaci_ITPR4	<i>Aphanomyces astaci</i>	Oomycetes	3.00E-55	27	1933	H_A_C	
XP_008618486.1	Sdclina_ITPR4	<i>Saprolegnia diclina</i>	Oomycetes	6.00E-54	38	2441	L_H_A_C	
CDW83968.1	Slennae_ITPR2	<i>Stylonychia lemnae</i>	Alveolata	5.00E-53	27	2773	L_M_H_H_A_C	
XP_009827523.1	Aastaci_ITPR5	<i>Aphanomyces astaci</i>	Oomycetes	3.00E-53	24	2841	L_A_C	
EJY8355.1	Otrifallax_ITPR2	<i>Oxytricha trifallax</i>	Alveolata	2.00E-51	26	2877	L_H_H_A_C	
XP_004333542.1	Acastellanii_ITPR	<i>Acanthamoeba castellanii</i>	Amoebozoa	1.00E-49	37	3344	L_H_H_A_C	
XP_004347577.1	Ccapaspora_owczarzakii_ITPR	<i>Capaspora owczarzakii</i>	Ichthyosporidia	2.00E-49	36	3232	L_M_H_H_A_C	
XP_011605455.1	Trubripes_ITPR2	<i>Takifugu rubripes</i>	Chordata	6.00E-49	36	2679	L_M_H_H_A_C	
XP_008861941.1	Ainvadans_ITPR4	<i>Aphanomyces invadans</i>	Oomycetes	1.00E-47	27	2665	L_H_H_A	
CCC21095.1	Ptetraurelia_TPA_1_1a	<i>Paramecium tetraurelia</i>	Alveolata	2.00E-46	34	2972	L_H_A_C	
XP_014646869.1	Csimum_ITPR2	<i>Ceratotherium simum simum</i>	Chordata	3.00E-46	37	2670	L_M_H_H_A_C	
XP_007453130.1	Lveixillifer_ITPR1	<i>Lipotes vexillifer</i>	Chordata	7.00E-46	33	2744	L_M_H_H_A_C	
XP_003762438.1	Sharrisii_ITPR1	<i>Sarcophilus harrisii</i>	Chordata	9.00E-46	33	2743	L_M_H_H_A_C	
XP_007500194.1	Mdomestica_ITPR1	<i>Monodelphis domestica</i>	Chordata	9.00E-46	33	2750	L_M_H_H_A_C	
XP_009300863.1	Dreio_ITPR1	<i>Danio rerio</i>	Chordata	2.00E-45	34	2683	L_M_H_H_A_C	
XP_008271820.1	Oocinulus_ITPR1	<i>Oryctolagus cuniculus</i>	Chordata	2.00E-45	32	2725	L_M_H_H_A_C	
AAB04947.2	Hsapientis_ITPR1	<i>Homo sapiens</i>	Chordata	4.00E-45	32	2710	L_M_H_H_A_C	
XP_012817182.1	Xtropicalis_ITPR1	<i>Xenopus (Silurana) tropicalis</i>	Chordata	5.00E-45	35	2702	L_M_H_H_A_C	
AIU40167.1	Tcastaneum_ITPR	<i>Tribolium castaneum</i>	Ecdysozoa	1.00E-44	35	2724	L_M_H_H_A_C	
XP_013084517.1	Aaustalis_ITPR1	<i>Apteryx australis mantelli</i>	Chordata	2.00E-44	32	2750	L_M_H_H_A_C	
CCC21096.1	Ptetraurelia_TPA_1_1c	<i>Paramecium tetraurelia</i>	Alveolata	2.00E-44	34	2980	L_M_H_A_C	
AGN03925.1	Djaponica_ITPR	<i>Dugesia japonica</i>	Platyhelminthes	2.00E-44	39	2666	L_M_H_H_A_C	
XP_014460900.1	Amisissipiensis_ITPR1	<i>Alligator mississippiensis</i>	Chordata	2.00E-44	32	2644	L_M_H_H_A_C	
XP_006808860.1	Nbrichardi_ITPR1	<i>Neolamprologus brichardi</i>	Chordata	7.00E-44	33	2744	L_M_H_H_A_C	
XP_008166289.1	Cbelli_ITPR1	<i>Chrysemys picta bellii</i>	Chordata	8.00E-44	32	2718	L_M_H_H_A_C	
XP_013775375.1	Lpolypheum_ITPR	<i>Limulus polyphemus</i>	Ecdysozoa	3.00E-43	34	2765	L_M_H_H_A_C-Abhyd	
XP_007907205.1	Cmili_ITPR2	<i>Callorhynchus milii</i>	Chordata	4.00E-43	34	2694	L_M_H_H_A_Ydli	
BA40384.1	Hsapientis_ITPR2	<i>Homo sapiens</i>	Chordata	8.00E-43	33	2701	L_M_H_H_A_C	
KRY53102.1	Tbritovi_ITPR	<i>Trichinella britovi</i>	Ecdysozoa	6.00E-41	33	2663	L_M_H_H_A_C	
XP_004938060.1	Ggallus_ITPR2	<i>Gallus gallus</i>	Chordata	8.00E-41	33	2717	L_M_H_H_A_C	
NP_001300740.1	Dreio_ITPR3	<i>Danio rerio</i>	Chordata	8.00E-40	33	2634	L_M_H_H_A_C	
XP_002939518.3	Xtropicalis_ITPR3	<i>Xenopus (Silurana) tropicalis</i>	Chordata	1.00E-37	34	2673	L_M_H_H_A_PAH	
EMP32350.1	Cmyda_ITPR3	<i>Chelonia mydas</i>	Chordata	2.00E-38	35	2570	L_M_H_H_A_C	
XP_011620146.1	Trubripes_ITPR3	<i>Takifugu rubripes</i>	Chordata	4.00E-36	33	2682	L_M_H_H_A	
XP_001747685.1	Mbrevicollis_ITPR	<i>Monosiga brevicollis</i>	Choanoflagellida	6.00E-36	30	2669	L_M_H_H_A_C	
XP_004649843.1	Jjaculus_ITPR3	<i>Jaculus jaculus</i>	Chordata	1.00E-35	33	2795	L_M_H_H_A_Coli	