

Human Phosphatidylinositol 3 Kinase-Related Catalytic Domain Alignment

PI3Ka	896	LFTRSCAGYCVATFILGIGDRHNSNIMVK-DDGQLFHIDFGHFLDHKKKFGYKRERVPFVLTQD	
DNAPK	3903	HFASSHALICISHWILGIGDRHLNFMVAMETGGVIGIDFGHAFGSAT-QFLVPPELMPFVLTRQ	
ATR	2456	AYCRSTAVMSMGYILGIGDRHGENILFDSL TGE CVHVD FNCLFNKGE-TFE-VPEIVPFVLTHN	
ATM	2851	AYTRSVATSSIVGYILGIGDRHVQNILINEQSAELVHIDLGVAFEQ GK-ILP-TPETVPFVLTRD	
mTOR	2319	NYTRSLAVMSMGYILGIGDRHPSNMLDRLSGKILHIDFGDCFEVAM-TREKFPEKIPFRLTRM	
TRRAP	3671	MFTIQLALIGFAEFVHLHLNRLNPEMLQIAQDTGKLNVA YFRFDINDAT-GDL DANRPVPFRLTPN	
SMG1	3456	KSWQDNIQT VLF TLVQAMGQVRSQEHVEMLQEITPTL KELKTQSQSIYNNLVSFASPLVTDATNE	
PI3Ka	960	FLIVISKGAQECTKTREFERFQEMCYKAYLAIRQHANLFIN--LFSMMLG-----	
DNAPK	3967	FINLMLPMKETGLMYSIMVHALRAFRSDPGLLTNTMDV FVKEPSFDWKNFEQKMLKKGGG	
ATR	2519	MVNGMGPMGTEGLFRRACEVTMRLMRDQREPLMSVLKTF LHDPLVEWSKP-----	
ATM	2914	IVDGMGITGVEGVFRRCC EKTMEVMRNSQETLLTIVEVLLYDPLFDWTMNPL-----	
mTOR	2383	LTNAMEVTGLDGNYRITC HTVMEVLRHKDSVMAVLEAFVYDPLLNWRLMDTNTKGNKRS	
TRRAP	3735	ISEFLT TIGVSGPLTASMIAVARCFAPNFKVDGILKTVLRDEIIAWHKK-----	
SMG1	3521	CSSPTSSATYQPSFAAAVRSNTGQKTQPDVMSQNARKLIQKNLATSADTPPS-----	
PI3Ka	1008	-----SGMPELQSFDDIAYIRKTLALDKTEQEAL EYFMKQMN-----	
DNAPK	4027	WIQEINVAEKNWYPRQKICYAKRKL AGANPAVITCDELLLGHEKAPAFRDYVAVA	
ATR	2569	-----VKGHSKAPLNETGEVVNEKAKTHVLDIEQRLQGVIK-----	
ATM	2966	KALYLQORPEDETELHPTLNADDQECKRNLSDIDQSFDKVAER-----VL	
mTOR	2443	RTRTDSYSAGQSVEILDGVELGEP AHKKTGTTVPESIH SFIGDGLVKPEALNKKA	
TRRAP	3785	-----TQEDTSSPLSAAGQPENMDSQQLVSLVQKAVTAIMTR-----	
SMG1	3573	----TVPGTGKSVACSPKKAVRDPKTGKAVQERN SYAVSVWKR-----	
PI3Ka	1045	-----DAHHGG-----WTTKMDWIFH	1060
DNAPK	4082	RGSKDHNIRAQEP-----ESGLSEETQVKCLMD	4108
ATR	2605	-----TRNRVTG-----LPLSIEGHVHYLIQ	2625
ATM	3011	MRLQEKLKGV EEG-----TVLSVGGQVNLLIQ	3037
mTOR	2447	IQIINRVRDKLTGRDFSHDDTLDVPTQVELLIK	2530
TRRAP	3822	----LHNLAQFEG-----GESQVNTLVA	3840
SMG1	3612	-----VKAKLEGRDVPNRRMSVAEQVDYVIK	3638

Pig Phosphatidylinositol
3-Kinase Catalytic
Subunit
(residues 141-1102,
white)
PDB: 1E7V

