

A	Parametium MKS3	-----10-----20-----30-----40-----50-----60-----70-----80-----90-----100-----110-----120-----130-----140-----
	Mouse MKS3	MGMVTRTRPVAAMAVRSRSSTGTAYLLVLLCEVSWAQIFSFPRRPETCDFNQYFDISALSCAPCGAN-QRRDALGTSCVCLFGYHMSNNGGPAIICKKCPENMKGVTKDGWDCISCPSGLTAEGKCHCPTGHILVE
	Human MKS3	-----MAVWSLLSARAVTAFLLFLPRFLQAQTFSPFPQPEKCDNQYFDISALSCVPCGAN-QRQDARGTSCVCLFGFQMIISNNGGPAIICKKCPENMKGVTEDEWNCISCPSDLTAEGKCHCPTGHILVE
	Consensus	MGMVTRTRPVAAMAVSXXSXXXTAXLLVXXXXXXXXaXfSfpfqXpXcDXnQYfdisalsCXpCgaNTqRXaXgtsCvcipGyqmishNggpXiickkCpenmkGVTKDGWXCISCPSGLTAEGKCHCPTGHILVE
	Parametium MKS3	YFSGDSLSQNSQTSASN----AYPNAYREQVPPDPDKLMIYTGSCQCPQTGYIKSYDRCILSTQKLTIGSLIFDSSYIVEYETDQKIASYMLSRVGYAITMCYYSSINACOLLANLCVLQFLDLTKP---ISIFLDE
	Mouse MKS3	RNVSGSLLAQATCELCDESENSFTKANALGTRCVRCEPTFVNTSRSCSCSEPHTLTGG----LCFSNTGNFHQRVISTARYGELGMSLNSSEWFAKYLAATAAACWTHANLTSCQALGNMCMNMNSYDSTTLDAQRLFFHYI
	Human MKS3	RDINGTLLSQATCELCGGENSFMMVVALGDCVRCPTFVNTSRSCACSEPNILTGG----LCFSGTGNFPLRISARYGEVMSLTSEWFAKYLSAAACWVYANLTSCQALGNMCMNMNSYDFATFDAGLQFQFI
	Consensus	XXSGXLSQATCELCDEHNSFXXXNALGXCVRCPTFVNTSRSCXCEPXXltggDRCILCfsXTgnTXXRXISXaryGXgmsIXsewfakylQXXaaaCWYanltsCQALGnMCMnmnsydXXTXDaCXIFXXI
	Parametium MKS3	LSSKIPAS-----300-----AALFPVSNTETINIIYQTAFQTMKLLDSDSKGRRYNYA IQKYDLGDLSDSTLR-SEFILCPHSPGDEINSRAFGLNMKISCTLDLDAFLQNYEMYMYELSVTAIRDNTIVPQNVIYFL
	Mouse MKS3	FESTAGLISVHSVPFWRQNLFWLFYGDQPLAPQVLSTPLPTNFSFKGNQ---LKFVAASYDIRGNFIKWQPLEGGVLQLCPDTERRIDAAYAFGTTYQONCEISLSKLLVDFSSFFVFDVYLEYTDQEQHRLWPIPV
	Human MKS3	FENTAGLSTVHSISFWRQNLFWLFYGDQLGLAPQVLSTSLPTNFSFKGENQNTKLFVAASYDIRGNFLKWQTEGGVLQLCPDTERINAAYSEGTTYQONCEIPIISKILLIDFPTPIFYDVYLEYTDENQHQLILAVPV
	Consensus	festaglsXVHSXXFWRQNLFWLFYgdqXglapqvlsXtlptnfsfkgXnqXXXLkfvaasYDirGNfikwqlLeGGvlqLCPdieXrXaayaFGTTYqonCEIxisXlXdXXpXfydvyleytDenqhXXXXXpY
	Parametium MKS3	VNLKDKDGNLPNTDKATQNSIFVKRIFLVDLTLSKKDYTSRAETFEYIRVYSKQIVILPSQDS-YEQIVVPYVVEYSIVRNSGESFGYADFEEALQISPDPTNYWVTIILFIAIYNVILIVWLFRIYVVTKANPSS
	Mouse MKS3	LNLNLQHKKLFVNQDSSSKWLLTRRIFLVDVAVSGRENDLG--NQPRVIRVATQISLSIRLVPNTKNGNIYTPLLTIAYSDDIDKNAHSQSAKISFSVKYEMNQDASVHTDIALGVLGGLAVLSSLLKTAGWKRRIGSPM
	Human MKS3	LNLNLQHKKLFVNQDSSSGWLLTRRIFLVDVAVSGRENDLG--TQPRVIRVATQISLSVHLVPNTINGNIYPLLTIIAYSDDIDKANSQSQVKSFSVTYEMDHEAHVQTDIALGVLGGLAVLASLLKTAGWKRRIGSPM
	Consensus	LNlnlqhkkXfVnQDSSXxkwlltrRIFLVDavsgrendlgPAXGPrvIRVAtqIsIsXlvpnXngnIYXPIxtiaYSdidiXaxsqsakXsfsvXyemdXxaxXltdialgvlgglavXsLlktagWkrrigSPm
	Parametium MKS3	RENYMLQLIKNMAQLIDSWTDWMYFLFFMTAYWFFIFFKFNTPFLMLNQNEISNYLPHYGLFYTIFALRLITLAIYACSSISYFIDWETTEIHRPVEKRRQEELREENILVTANKIKSKSVSWRTLLEVANEFNE
	Mouse MKS3	IDLQTVKMFLLYYAGDUAN---VFFIITVGTGLYWLIFFKAQKSVSVLLP---MEVQEERFVTVYGCAFAMKALQFLHKFISQISIDIFFIDWE-----RPKGKVLKAVEGEGGVRSATVPVSIWRTYFVANEWNE
	Human MKS3	IDLQTVKMFLLYYAGDUAN---VFFIITVGTGLYWLIFFKAQKSVSVLLP---MEIQEERFVTVYGCAFALKALQFLHKLISQITIDVFFIDWE-----RPKGKVLKAVEGEGGVRSATVPVSIWRTYFVANEWNE
	Consensus	IdlqtVXxfIXyyAgdLanSWTDvfiitvgtglYWLIFFKAQksvsVlIpNQNmXqeerFvtyvgcaFAlkaQfLhXIsQIsIdiFIDWETTEIHRPVERpkgkvLkaveGeggvrsatvpVSIWRTYFVANEWNE
	Parametium MKS3	LSTVRVTSVEWTLIILGEVLIGLGEQKRFIE---PDLIETQPFVRENPIIKYFLVQFVYLMIGLGQLILR-RILNIWQPPYPENFVDLQTIANVSIFILDDNLHGGYIHGENPLGFSEGGIPLHQCERNESKNKGKNR
	Mouse MKS3	IQTVRKINPLFQVLTTLFFLEVVGFKNALMDSSSSLSRNPSDYTAPYSRILRYAYATAIWLVIIGTIQVVFFAAFYERFIEDKIRQFVDLCMSNSVSVFLLSHRFCFGYYIHGRSVHGHADTNMEEMNMNLKREANLCSQR
	Human MKS3	IQTVRKINSLFQVLTTLFFLEVVGFKNALMDSSSSLSRNPSPYIAPYSCILRYAYSAALWLAIGTIQVVFFAAFYERFIEDKIRQFVDLCMSNIISVFLLSHKFCFGYYIHGRSVHGHADTNMEEMNMNLKREANLCSQR
	Consensus	IqTVRkinXlfqvltXfFfLevvGFknlaImDSSSSlsrnpXXYXsPysXlRyaXXaXlXIGIqvvfAXfyerfiedkirqFVDLCsmsNvSvFLshXcFGYYIHgrsvhGhadtnmeemnmnlkreanlcsqr
	Parametium MKS3	GLVKDGYDSQLCTYELFPPEPFKHQFEVNYQGIRNYKEKREMSLGIENVLQKFKEQFLSKKINEVKKDKRANFIRTKETAQRYFDYPPDELA YDDFNKSQVPYFYKDPDQYRRFFSGYMYFVTDIIIFTFFVL
	Mouse MKS3	GLVpN---TDGQTFQIAYSSQMRQHYDRIHETLTRNGPARLLSSSGSTFEQSIKAYHAMNKFLGSFIDVHKEMDYFIKDKLLLERILG-----MEFMEPMEKSIFYNDEGHSFSSVLYYGNEATLLIFDLLFFCVVDL
	Human MKS3	GLVpN---TDGQTFEIAISNQMRQHYDRIHETLIRKNGPARLLSSASTFEQSIKAYHMMNKFLGSFIDVHKEMDYFIKDKLLLERILG-----MEFMEPMEKSIFYNDEGYSFSSVLYYGNEATLLIFDLLFFCVVDL
	Consensus	GLVpNgyDldgqTfeiaysXqmrqhydrihetlXfXngparllSssXstfEqsikayhXmnKflgsfidvKhkemydyfikdklllerilgPPDELAmeFmePmeksiFYnDegysfssVlyyGnEatLLIfDIlIfcVvdL
	Parametium MKS3	VTQNVASILQYFVTKSFEWLKQEWQKSNISEKTKIKDKRFLI
	Mouse MKS3	ACQDFVLSASFLTYLQQEIRFRIRNTVGQKNLAKTKTLVDERFLI
	Human MKS3	ACQNFILASFLTYLQQEIRFRIRNTVGQKNLASKTLVDQREFLI
	Consensus	acQnfxLasfTYlqqeiFRXirntvgqkNlAXKTVDXREFLI

B

Cysteine Rich Domain

[illegible]

Paramecium MKS3 Cysteine Rich domain	- - N C V Q S Q V N L K Y S F S G D S L S Q N S C T S C A S N - - - A Y P N A Y R E Q C V P C P D K L M I Y T G S C E C
Mouse MKS3 Cysteine rich domain	K C H C P T G H I L V E R N V S G S L L A Q A T C E L C D E S E N S F T K A N A L G T R C V R C E P T F V N T S R S C S C
Human MKS3 Cysteine Rich domain	K C H C P I G H I L V E R D I N G T L L S Q A T C E L C D G N E N S F M V V N A L G D R C V R C E P T F V N T S R S C A C
Consensus	K C h C p x g h i l v e r x x s g x i l l s q a t c e l c d x n e n s f x x x n a l g x r c v r c e p t f v n t s r s c x c

Coiled Coil Domain

Paramecium MKS3 Coiled Coil domain	N	F	V	D	L	C	T	I	A	N	V	S	I	F	I	L	D	D	N	L	H	G	Y	Y	I	H	G	E	N	P
Mouse MKS3 Coiled Coil domain	Q	F	V	D	L	C	S	M	S	N	V	S	V	F	L	L	S	H	R	C	F	G	Y	Y	I	H	G	R	S	V
Human MKS3 Coiled Coil domain	Q	F	V	D	L	C	S	M	S	N	I	S	V	F	L	L	S	H	K	C	F	G	Y	Y	I	H	G	R	S	V
Consensus	q	F	V	D	L	C	s	m	s	N	v	S	v	F	I	L	s	h		c	f	G	Y	Y	I	H	G	r	s	v