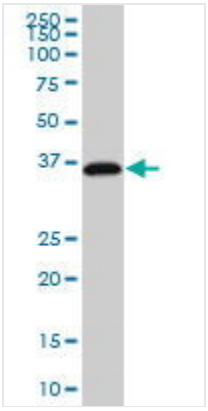
RP2 Antibody – Mouse Monoclonal

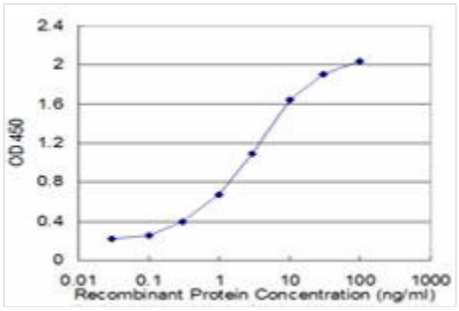
PRODUCT OVERVIEW

Product Name	RP2, Monoclonal Antibody
Full Product Name	RP2 (Retinitis Pigmentosa 2 (X-Linked Recessive), DELXp11.3, KIAA0215, TBCCD2) (AP)
Product Gene Name	anti-RP2 antibody
Product Synonym Names	Retinitis Pigmentosa 2 (X-Linked Recessive); DELXp11.3; KIAA0215; TBCCD2
Clonality	Monoclonal
Isotype	IgG2a,k
Clone Number	1B4
Host	Mouse
Form/Format	Supplied as a liquid in PBS, pH 7.2. No preservative added. Labeled with Alkaline Phosphatase (AP).
Purity/Purification	Purified
Specificity	Recognizes RP2.
Preparation and Storage	Store product at 4 degree C. DO NOT FREEZE! Stable at 4 degree C for 12 months after receipt as an undiluted liquid. Dilute required amount only prior to immediate use. Further dilutions can be made in assay buffer. For maximum recovery of product, centrifuge the original vial prior to removing the cap.
Molecular Weight	40kDa
OMIM	gene 312600
3D Structure	ModBase 3D Structure for O75695
Immunogen	RP2 (NP_008846, 251aa-350aa) partial recombinant protein with GST tag. MW of the GST tag alone is 26kD.
Immunogen Sequence	RKLIDEMVGKGFFLVQTKEVSMKAEDAQRVFREKAPDFLPLLNKGPVIALEFNGDGAVEVCQLIVNEIFNGTKMFVSESKETASGDVDSFYNFADIQMGI
Conjugate	AP
Product Categories/Family for anti-RP2 antibody	Antibodies; Proteins
Applications Tested/Suitable for anti-RP2 antibody	Western Blot (WB)
Application Notes for anti-RP2 antibody	Applications are based on unconjugated antibody.
Related Product Information for anti-RP2 antibody	The RP2 locus has been implicated as one cause of X-linked retinitis pigmentosa. The predicted gene product shows homology with human cofactor C, a protein involved in the ultimate step of beta-tubulin folding. Progressive retinal degeneration may therefore be due to the accumulation of incorrectly-folded photoreceptor or neuron-specific tubulin isoforms followed by progressive cell death [provided by RefSeq]

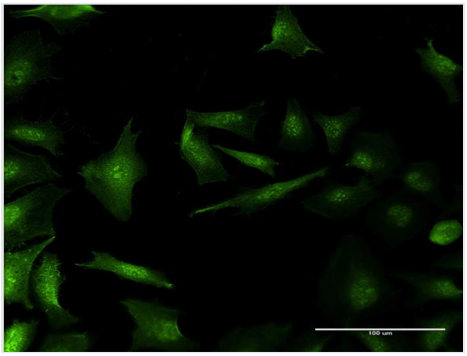
Other Notes	Small volumes of anti-RP2 antibody vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for RP2 purchase	MBS6163800 is an antibody targeting RP2. Also known as RP2 (Retinitis Pigmentosa 2 (X-Linked Recessive), DELXp11.3, KIAA0215, TBCCD2) (AP). Host: Mouse.



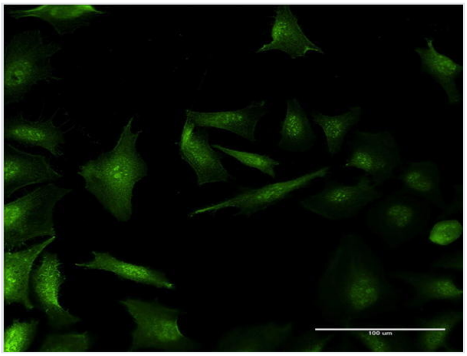
Western Blot (WB) of anti-RP2 antibody
RP2 monoclonal antibody (M01), clone 1B4. Western Blot analysis of RP2 expression in Hela S3 NE.



Testing Data of anti-RP2 antibody
Detection limit for recombinant GST tagged RP2 is approximately 0.1ng/ml as a capture antibody.



Immunofluorescence (IF) of anti-RP2 antibody
Immunofluorescence of monoclonal antibody to RP2 on HeLa cell. [antibody concentration 10 ug/ml]



Immunofluorescence (IF) of anti-RP2 antibody
Immunofluorescence of monoclonal antibody to RP2 on HeLa cell. [antibody concentration 10 ug/ml]

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for RP2. It may not necessarily be applicable to this product.

NCBI GI #	170016081
NCBI GeneID	6102
NCBI Accession #	NP_008846
UniProt Primary Accession #	O75695
UniProt Related Accession #	O75695
GenBank Nucleotide #	NM_006003
NCBI Official Full Name	protein XRP2
NCBI Official Synonym Full Names	RP2 activator of ARL3 GTPase
NCBI Official Symbol	RP2
NCBI Official Synonym Symbols	XRP2; NME10; TBCCD2; NM23-H10; DELXp11.3

UniProt Protein Name	Protein XRP2
Protein Family	Protein
UniProt Gene Name	RP2
UniProt Entry Name	XRP2_HUMAN
NCBI Protein Information	protein XRP2
UniProt Comments for RP2	RP2: Acts as a GTPase-activating protein (GAP) involved in trafficking between the Golgi and the ciliary membrane. Involved in localization of proteins, such as NPHP3, to the cilium membrane by inducing hydrolysis of GTP ARL3, leading to the release of UNC119 (or UNC119B). Acts as a GTPase-activating protein (GAP) for tubulin in concert with tubulin-specific chaperone C, but does not enhance tubulin heterodimerization. Acts as guanine nucleotide dissociation inhibitor towards ADP-ribosylation factor-like proteins. Defects in RP2 are the cause of retinitis pigmentosa type 2 (RP2); also known as X-linked retinitis pigmentosa 2 (XLRP-2). RP leads to degeneration of retinal photoreceptor cells. Patients typically have night vision blindness and loss of midperipheral visual field. As their condition progresses, they lose their far peripheral visual field and eventually central vision as well. Belongs to the TBCC family. Protein type: Chaperone Chromosomal Location of Human Ortholog: Xp11.3 Cellular Component: centriole; Golgi apparatus; cytoplasm; plasma membrane; cytoplasmic vesicle Molecular Function: protein binding; GTP binding; unfolded protein binding; nucleoside diphosphate kinase activity; actin binding; GTPase activator activity; ATP binding Biological Process: GTP biosynthetic process; CTP biosynthetic process; protein transport; protein folding; visual perception; organelle organization and biogenesis; UTP biosynthetic process; cell morphogenesis; nucleoside diphosphate phosphorylation; cytoskeleton organization and biogenesis; post-Golgi vesicle-mediated transport; post-chaperonin tubulin folding pathway; positive regulation of GTPase activity Disease: Retinitis Pigmentosa 2
Research Articles on RP2	**1.** four frameshift mutations including three novel mutations of c.1059 + 1 G > T, c.2002dupC and c.2236_2237delCT, as well as a previously reported mutation of c.2899delG were detected in the RPGR gene in the other four families. Our study further expands the mutation spectrum of RP2 and RPGR, and will be helpful for further study molecular pathogenesis of X-linked retinitis pigmentosa.
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