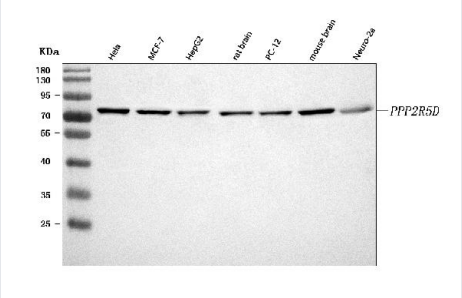
PPP2R5D Antibody – Rabbit Polyclonal

PRODUCT OVERVIEW

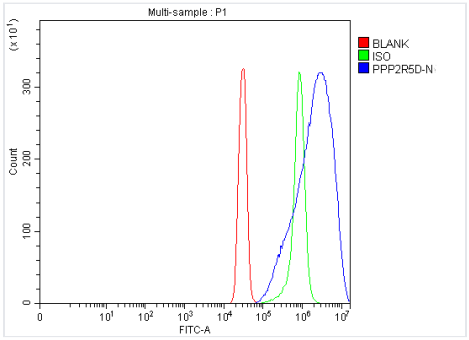
Product Name	PPP2R5D, Polyclonal Antibody
Full Product Name	Anti-PPP2R5D Antibody Picoband
Product Gene Name	anti-PPP2R5D antibody
Product Synonym Names	semaphorin 3C; Semaphorin-3C; Semaphorin-E; Sema E; SEMA3C; SEMAE
Clonality	Polyclonal
Isotype	Rabbit IgG
Host	Rabbit
Species Reactivity	Human, Mouse, Rat
Form/Format	Lyophilized. Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
Purity/Purification	Immunogen affinity purified.
Specificity	Expressed intensely in the heart, skeletal muscle, colon, small intestine, ovary, testis, and prostate. Faint expression ubiquitously among other organs, including brain.
Preparation and Storage	At -20 degree C for one year from date of receipt. After reconstitution, at 4 degree C for one month. It can also be aliquotted and stored frozen at -20 degree C for six months.Avoid repeated freezing and thawing.
Molecular Weight	69,992 Da
Chromosome Location	Chromosome: 6; NC_000006.11 (42952237..42980083). Location: 6p21.1
OMIM	601646
3D Structure	ModBase 3D Structure for Q14738
Immunogen	E coli-derived human PPP2R5D recombinant protein (Position: R91-L602).
Subcellular Localization	Secreted
Reconstitution	Adding 0.2 ml of distilled water will yield a concentration of 500ug/ml.
Cross Reactivity	No cross-reactivity with other proteins.
Protein Function	Binds to plexin family members and plays an important role in the regulation of developmental processes. Required for normal cardiovascular development during embryogenesis. Functions as attractant for growing axons, and thereby plays an important role in axon growth and axon guidance.
Product Categories/Family for anti-PPP2R5D antibody	Primary Antibodies; Cancer; Cell Biology; Oncoproteins/Suppressors; Protease Inhibitors; Proteolysis/Ubiquitin; Tumor Suppressors
ISO Certification	Manufactured in an ISO 13485:2003 and EN ISO 13485:2012 Certified Laboratory.
Applications Tested/Suitable for anti-PPP2R5D antibody	Western Blot (WB), Flow Cytometry (FC/FACS), ELISA (EIA)
Application Notes for anti-PPP2R5D antibody	WB: 0.1-0.25ug/ml, Human, Mouse, Rat FC/FACS (Fixed): 1-3ug/1x1x10^6 cells, Human ELISA: 0.1-0.5ug/ml
Related Product Information for anti-PPP2R5D antibody	The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.

Product References and Citations for anti-PPP2R5D antibody	1. Deciphering Developmental Disorders Study. Large-scale discovery of novel genetic causes of developmental disorders. Nature 519: 223-228, 2015.2. Houge, G., Haesen, D., Vissers, L. E. L. M., Mehta, S., Parker, M. J., Wright, M., Vogt, J., McKee, S., Tolmie, J. L., Cordeiro, N., Kleefstra, T., Willemsen, M. H., and 17 others. B56-delta-related protein phosphatase 2A dysfunction identified in patients with intellectual disability. J. Clin. Invest. 125: 3051-3062, 2015. 3. Louis, J. V., Martens, E., Borghgraef, P., Lambrecht, C., Sents, W., Longin, S., Zwaenepoel, K., Pijnenborg, R., Landrieu, I., Lippens, G., Ledermann, B., Gotz, J., Van Leuven, F., Goris, J., Janssens, V. Mice lacking phosphatase PP2A subunit PR61/B'delta (Ppp2r5d) develop spatially restricted tauopathy by deregulation of CDK5 and GSK3-beta. Proc. Nat. Acad. Sci. 108: 6957-6962, 2011.
Other Notes	Small volumes of anti-PPP2R5D 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 PPP2R5D purchase	MBS1758718 is an antibody targeting PPP2R5D. Also known as Anti-PPP2R5D Antibody Picoband. Reactive in Human, Mouse, Rat. Host: Rabbit.



Western Blot (WB) of anti-PPP2R5D antibody

Figure 1. Western blot analysis of PPP2R5D using anti-PPP2R5D antibody (MBS1758718).Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel)/90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.Lane 1: human Hela whole cell lysates,Lane 2: human MCF-7 whole cell lysates,Lane 3: human HepG2 whole cell lysates,Lane 4: rat brain tissue lysates,Lane 5: rat PC-12 whole cell lysates,Lane 6: mouse brain tissue lysates,Lane 7: mouse Neuro-2a whole cell lysates.After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti-PPP2R5D antigen affinity purified polyclonal antibody (#MBS1758718) at 0.25ug/mL overnight at 4 degree C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (#MBS176460) with Tanon 5200 system. A specific band was detected for PPP2R5D at approximately 74 kDa. The expected band size for PPP2R5D is at 70 kDa.



Flow Cytometry (FC/FACS) of anti-PPP2R5D antibody

Figure 2. Flow Cytometry analysis of SiHa cells using anti-PPP2R5D antibody (MBS1758718).Overlay histogram showing SiHa cells stained with MBS1758718 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-PPP2R5D Antibody (MBS1758718, 1ug/1x106 cells) for 30 min at 20 degree C. DyLight488 conjugated goat anti-rabbit IgG (MBS177405, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20 degree C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x106) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PPP2R5D. It may not necessarily be applicable to this product.

NCBI GI #	394582140
NCBI GeneID	5528
NCBI Accession #	NP_001257405.1
UniProt Primary Accession #	Q14738
UniProt Secondary Accession #	O00494; O00696; Q15171; Q5TC39; A8K3I9; B5BUA6
UniProt Related Accession #	Q14738
GenBank Nucleotide #	NM_001270476.1
NCBI Official Full Name	serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit delta isoform isoform 4
NCBI Official Synonym Full Names	protein phosphatase 2, regulatory subunit B', delta
NCBI Official Symbol	PPP2R5D

NCBI Official Synonym Symbols	B56D
UniProt Protein Name	Serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit delta isoform
UniProt Synonym Protein Names	PP2A B subunit isoform B'-delta; PP2A B subunit isoform B56-delta; PP2A B subunit isoform PR61-delta; PP2A B subunit isoform R5-delta
Protein Family	Serine/threonine-protein phosphatase
UniProt Gene Name	PPP2R5D
UniProt Entry Name	2A5D_HUMAN
NCBI Protein Information	serine/threonine-protein phosphatase 2A 56 kDa regulatory subunit delta isoform; PP2A B subunit isoform B'-delta; PP2A B subunit isoform R5-delta; PP2A B subunit isoform B56-delta; PP2A B subunit isoform PR61-delta; PP2A, B subunit, B' delta isoform; PP2A
NCBI Summary for PPP2R5D	The product of this gene belongs to the phosphatase 2A regulatory subunit B family. Protein phosphatase 2A is one of the four major Ser/Thr phosphatases, and it is implicated in the negative control of cell growth and division. It consists of a common heteromeric core enzyme, which is composed of a catalytic subunit and a constant regulatory subunit, that associates with a variety of regulatory subunits. The B regulatory subunit might modulate substrate selectivity and catalytic activity. This gene encodes a delta isoform of the regulatory subunit B56 subfamily. Alternatively spliced transcript variants encoding different isoforms have been identified. [provided by RefSeq, Jul 2008]
UniProt Comments for PPP2R5D	PPP2R5D: The B regulatory subunit might modulate substrate selectivity and catalytic activity, and also might direct the localization of the catalytic enzyme to a particular subcellular compartment. PP2A consists of a common heterodimeric core enzyme, composed of a 36 kDa catalytic subunit (subunit C) and a 65 kDa constant regulatory subunit (PR65 or subunit A), that associates with a variety of regulatory subunits. Proteins that associate with the core dimer include three families of regulatory subunits B (the R2/B/PR55/B55, R3/B"/PR72/PR130/PR59 and R5/B'/B56 families), the 48 kDa variable regulatory subunit, viral proteins, and cell signaling molecules. Interacts with SGOL1. By retinoic acid; in neuroblastoma cell lines. Isoform Delta-2 is widely expressed. Isoform Delta-1 is highly expressed in brain. Belongs to the phosphatase 2A regulatory subunit B56 family. 3 isoforms of the human protein are produced by alternative splicing. Protein type: Motility/polarity/chemotaxis; Protein phosphatase, regulatory subunit Chromosomal Location of Human Ortholog: 6p21.1 Cellular Component: nucleoplasm; protein phosphatase type 2A complex; cytosol; nucleus Molecular Function: protein binding; protein phosphatase type 2A regulator activity; protein serine/threonine phosphatase activity Biological Process: nervous system development; glycolysis; nerve growth factor receptor signaling pathway; MyD88-independent toll-like receptor signaling pathway; stress-activated MAPK cascade; glucose metabolic process; pathogenesis; toll-like receptor 3 signaling pathway; toll-like receptor 10 signaling pathway; toll-like receptor 2 signaling pathway; toll-like receptor 5 signaling pathway; MyD88-dependent toll-like receptor signaling pathway; dephosphorylation; regulation of catalytic activity; carbohydrate metabolic process; energy reserve metabolic process; toll-like receptor signaling pathway; innate immune response; toll-like receptor 9 signaling pathway; toll-like receptor 4 signaling pathway Disease: Mental Retardation, Autosomal Dominant 35
Research Articles on PPP2R5D	**1.** Protein kinase A mediated activation of protein phosphatase 2A is enabled by PPP2R5D phosphorylation, which modulates the affinity of the protein phosphatase 2A holoenzyme to its physiological substrates.
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