PPP2R2B Peptide - Middle Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	PPP2R2B, Blocking Peptide
Full Product Name	PPP2R2B Peptide - middle region
Product Gene Name	PPP2R2B blocking peptide
Product Synonym Gene Name	PR52B; SCA12; B55BETA; PR55BETA; PP2ABBETA; PP2APR55B; PR2ABBETA; PR55-BETA; PP2AB55BETA; PR2AB55BETA; PP2APR55BETA; PR2APR55BETA
Sequence	Synthetic peptide located within the following region: TVKLWKVSER DKRPEGYNLK DEEGRLRDPA TITTLRVPVL RPMDLMVEAT
Species Reactivity	Human
Form/Format	Lyophilized powder
Preparation and Storage	Add 100ul of sterile PBS. Final peptide concentration is 1 mg/ml in PBS. For longer periods of storage, store at -20 degree C. Avoid repeat freeze-thaw cycles.
Antibody/Peptide Pairs	PPP2R2B peptide (MBS3245650) is used for blocking the activity of PPP2R2B antibody (MBS3220853)
Molecular Weight	52 kDa
OMIM	604325
Product Categories/Family for PPP2R2B blocking peptide	Peptide
Applications Tested/Suitable for PPP2R2B blocking peptide	Western Blot (WB)
Related Product Information for PPP2R2B blocking peptide	The product of this gene belongs to the phosphatase 2 regulatory subunit B family. Protein phosphatase 2 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 beta isoform of the regulatory subunit B55 subfamily. Defects in this gene cause autosomal dominant spinocerebellar ataxia 12 (SCA12), a disease caused by degeneration of the cerebellum, sometimes involving the brainstem and spinal cord, and in resulting in poor coordination of speech and body movements. Multiple alternatively spliced variants, which encode different isoforms, have been identified for this gene. The 5' UTR of some of these variants includes a CAG trinucleotide repeat sequence (7-28 copies) that can be expanded to 66-78 copies in cases of SCA12.
Other Notes	Small volumes of PPP2R2B blocking peptide 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 PPP2R2B purchase	MBS3245650 is a blocking peptide targeting PPP2R2B. Also known as PPP2R2B Peptide - middle region. Reactive in Human.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for PPP2R2B. It may not necessarily be applicable to this product.

NCBI GI #	430727960
NCBI GeneID	5521
NCBI Accession #	NP_001258828.1

UniProt Primary Accession #	Q00005
UniProt Related Accession #	Q00005
GenBank Nucleotide #	NM_001271899.1
NCBI Official Full Name	serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B beta isoform isoform g
NCBI Official Synonym Full Names	protein phosphatase 2 regulatory subunit Bbeta
NCBI Official Symbol	PPP2R2B
NCBI Official Synonym Symbols	PR52B; SCA12; B55BETA; PR55BETA; PP2ABBETA; PP2APR55B; PR2ABBETA; PR55-BETA; PP2AB55BETA; PR2AB55BETA; PP2APR55BETA; PR2APR55BETA
UniProt Protein Name	Serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B beta isoform
UniProt Synonym Protein Names	PP2A subunit B isoform B55-beta; PP2A subunit B isoform PR55-beta; PP2A subunit B isoform R2-beta; PP2A subunit B isoform beta
Protein Family	Serine/threonine-protein phosphatase
UniProt Gene Name	PPP2R2B
UniProt Entry Name	2ABB_HUMAN
NCBI Protein Information	serine/threonine-protein phosphatase 2A 55 kDa regulatory subunit B beta isoform
NCBI Summary for PPP2R2B	The product of this gene belongs to the phosphatase 2 regulatory subunit B family. Protein phosphatase 2 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 beta isoform of the regulatory subunit B55 subfamily. Defects in this gene cause autosomal dominant spinocerebellar ataxia 12 (SCA12), a disease caused by degeneration of the cerebellum, sometimes involving the brainstem and spinal cord, and in resulting in poor coordination of speech and body movements. Multiple alternatively spliced variants, which encode different isoforms, have been identified for this gene. The 5' UTR of some of these variants includes a CAG trinucleotide repeat sequence (7-28 copies) that can be expanded to 55-78 copies in cases of SCA12. [provided by RefSeq, Jul 2016]
UniProt Comments for PPP2R2B	PPP2R2B: the B regulatory subunit of PP2A. May modulate substrate selectivity and catalytic activity, and directs the localization of the catalytic enzyme to particular subcellular compartments. PPP2R2B promotes autophagy and oxidative stress induced cell death that is related to apoptosis. The PP2A holoenzyme consists of a common heterodimeric core enzyme composed of a 36 kDa catalytic subunit (subunit C) and a 65 kDa constant regulatory subunit (subunit A), that associates with a variety of regulatory subunits. Three families of regulatory subunits associate with the core dimmer: B (R2/PR55/B55), BÂ¿ (R5/B56), and BÂ¿ (R3/PR72/PR130/PR59). Five isoforms of the human protein are produced by alternative splicing. Isoform 1 (Bbeta1) localizes within the cytoplasm. Isoform 2 (Bbeta2) localizes to both cytosolic and mitochondrial compartments under basal conditions, relocating to the mitochondrial compartment during apoptosis. Its targeting to the outer mitochondrial membrane (OMM) involves an association with import receptors of the TOM complex and is required to promote proapoptotic activity. The N-terminal 26 residues of isoform 2 constitute a cryptic mitochondrial matrix import signal that is necessary and sufficient for targeting the PP2A holoenzyme to the OMM. The last WD repeat of isoform 2 constitutes a mitochondrial stop-transfer domain that prevents PPP2R2B matrix translocation and signal sequence cleavage. Defects in PPP2R2B are the cause of spinocerebellar ataxia type 12 (SCA12). Protein type: Motility/polarity/chemotaxis; Apoptosis; Mitochondrial; Protein phosphatase, regulatory subunit Chromosomal Location of Human Ortholog: 5q32 Cellular Component: mitochondrial outer membrane; protein phosphatase type 2A complex; cytoskeleton; mitochondrion Molecular Function: protein binding; protein phosphatase type 2A regulator activity Biological Process: apoptosis; regulation of catalytic activity; signal transduction Disease: Spinocerebellar Ataxia 12

Research Articles on PPP2R2B	**1.** Dephosphorylation and total levels of beta-catenin were dependent on PR55beta in an adenoid cystic carcinoma tumor cell line.
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