PTPA Peptide - N-Terminal Region Blocking Peptide

PRODUCT OVERVIEW

Product Name	PTPA, Blocking Peptide
Full Product Name	PTPA Peptide - N-terminal region
Product Gene Name	PTPA blocking peptide
Product Synonym Gene Name	PP2A; PR53; PPP2R4; PTPA
Sequence	Synthetic peptide located within the following region: EGERQPPPDS SEEAPPATQN FIIPKKEIHT VPDMGKWKRS QAYADYIGFI
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	PTPA peptide (MBS3246707) is used for blocking the activity of PTPA antibody (MBS3221992)
Molecular Weight	39 kDa
OMIM	600756
Product Categories/Family for PTPA blocking peptide	Peptide
Related Product Information for PTPA blocking peptide	Protein phosphatase 2A is one of the four major Ser/Thr phosphatases and is implicated in the negative control of cell growth and division. Protein phosphatase 2A holoenzymes are heterotrimeric proteins composed of a structural subunit A, a catalytic subunit C, and a regulatory subunit B. The regulatory subunit is encoded by a diverse set of genes that have been grouped into the B/PR55, B'/PR61, and B"/PR72 families. These different regulatory subunits confer distinct enzymatic specificities and intracellular localizations to the holozenzyme. The product of this gene belongs to the B' family. This gene encodes a specific phosphotyrosyl phosphatase activator of the dimeric form of protein phosphatase 2A. Alternative splicing results in multiple transcript variants encoding different isoforms.
Other Notes	Small volumes of PTPA 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 PTPA purchase	MBS3246707 is a blocking peptide targeting PTPA. Also known as PTPA Peptide - N-terminal region. Reactive in Human.

ADDITIONAL DETAILS

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

NCBI GI #	301129290
NCBI GeneID	5524
NCBI Accession #	NP_001180326.1
UniProt Primary Accession #	Q15257
UniProt Related Accession #	Q15257
GenBank Nucleotide #	NM_001193397.1
NCBI Official Full Name	serine/threonine-protein phosphatase 2A activator isoform e

NCBI Official Synonym Full Names	protein phosphatase 2 phosphatase activator
NCBI Official Symbol	PTPA
NCBI Official Synonym Symbols	PP2A; PR53; PPP2R4
UniProt Protein Name	Serine/threonine-protein phosphatase 2A activator
UniProt Synonym Protein Names	PP2A, subunit B', PR53 isoform; Phosphotyrosyl phosphatase activator; PTPA; Serine/threonine-protein phosphatase 2A regulatory subunit 4; Serine/threonine-protein phosphatase 2A regulatory subunit B'
Protein Family	Low molecular weight protein-tyrosine-phosphatase
UniProt Gene Name	PPP2R4
UniProt Synonym Gene Names	PTPA; PTPA
UniProt Entry Name	PTPA_HUMAN
NCBI Protein Information	serine/threonine-protein phosphatase 2A activator
NCBI Summary for PTPA	Protein phosphatase 2A is one of the four major Ser/Thr phosphatases and is implicated in the negative control of cell growth and division. Protein phosphatase 2A holoenzymes are heterotrimeric proteins composed of a structural subunit A, a catalytic subunit C, and a regulatory subunit B. The regulatory subunit is encoded by a diverse set of genes that have been grouped into the B/PR55, B'/PR61, and B"/PR72 families. These different regulatory subunits confer distinct enzymatic specificities and intracellular localizations to the holozenzyme. The product of this gene belongs to the B' family. This gene encodes a specific phosphotyrosyl phosphatase activator of the dimeric form of protein phosphatase 2A. Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Jul 2008]
UniProt Comments for PTPA	PPP2R4: PPIases accelerate the folding of proteins. It catalyzes the cis-trans isomerization of proline imidic peptide bonds in oligopeptides. Acts as a regulatory subunit for serine/threonine- protein phosphatase 2A (PP2A) modulating its activity or substrate specificity, probably by inducing a conformational change in the catalytic subunit, a proposed direct target of the PPIase. Can reactivate inactive phosphatase PP2A-phosphatase methylesterase complexes (PP2A(i)) in presence of ATP and Mg(2+). Reversibly stimulates the variable phosphotyrosyl phosphatase activity of PP2A core heterodimer PP2A(D) in presence of ATP and Mg(2+) (in vitro). The phosphotyrosyl phosphatase activity is dependent of an ATPase activty of the PP2A(D):PPP2R4 complex. Is involved in apoptosis; the function appears to be independent from PP2A. Associates with PP2A heterodimeric core enzyme PP2A(D), composed of a 36 kDa catalytic subunit (subunit C) and a 65 kDa constant regulatory subunit (PR65 or subunit A). Interacts with PPP2CB. Widely expressed. Belongs to the PTPA-type PPIase family. 4 isoforms of the human protein are produced by alternative splicing. Protein type: Motility/polarity/chemotaxis; EC 5.2.1.8; Protein phosphatase, regulatory subunit Chromosomal Location of Human Ortholog: 9q34 Cellular Component: nucleoplasm; protein phosphatase type 2A complex; cytoplasm; nucleus Molecular Function: peptidyl-prolyl cis-trans isomerase activity; protein homodimerization activity; protein phosphatase 2A binding; protein heterodimerization activity; ATPase activity; protein phosphatase type 2A regulator activity; ATP binding; protein tyrosine phosphatase activator activity; receptor binding Biological Process: positive regulation of phosphoprotein phosphatase activity; negative regulation of protein amino acid dephosphorylation; protein peptidyl-prolyl isomerization; positive regulation of apoptosis; metabolic process; mitotic spindle organization and biogenesis in nucleus; negative regulation of phosphoprotein phosphatase activity; regulation of phosphoprotein phosphatase activity; positive regulation of protein amino acid dephosphorylation
Research Articles on PTPA	**1.** the current study demonstrated that PP2A activation promoted the migration of astrocytes and the underlying mechanism may be associated with the p38 signaling pathway.
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