SYNGAP1 Human Recombinant Protein

PRODUCT OVERVIEW

Product Name	SYNGAP1, Recombinant Protein
Full Product Name	Recombinant Human SYNGAP1 Protein, N-His
Product Gene Name	SYNGAP1 recombinant protein
Product Synonym Names	Synaptic Ras GTPase-activating protein 1; Synaptic Ras-GAP 1; Neuronal RasGAP; SYNGAP1; KIAA1938; Ras/Rap GTPase-activating protein SynGAP
Host	E coli
Form/Format	Lyophilized from a solution in PBS pH7.4, 0.02% NLS, 1mM EDTA, 4% Trehalose, 1% Mannitol.
Purity/Purification	>90% as determined by SDS-PAGE
Preparation and Storage	Use a manual defrost freezer and avoid repeated freeze thaw cycles. Store at 2 to 8 degree C for one week. Store at -20 degree C for twelve months from the date of receipt.
Molecular Weight	1343
Sequence Positions	Gly443-Asn635
OMIM	gene 612621
3D Structure	ModBase 3D Structure for Q96PV0
Species	Human
Reconstitution	Reconstitute in sterile water for a stock solution.
Product Categories/Family for SYNGAP1 recombinant protein	Recombinant Proteins
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Applications Tested/Suitable for SYNGAP1 recombinant protein	SDS-PAGE (SDS), Western Blot (WB), ELISA (EIA), Immunogen
Related Product Information for SYNGAP1 recombinant protein	MBS1579244 is a recombinant protein targeting SYNGAP1. Also known as Recombinant Human SYNGAP1 Protein, N-His. Host: E coli.
Other Notes	Small volumes of SYNGAP1 recombinant protein 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.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for SYNGAP1. It may not necessarily be applicable to this product.

NCBI GI #	150421676
NCBI GeneID	8831
NCBI Accession #	Q96PV0.4
UniProt Primary Accession #	Q96PV0
UniProt Secondary Accession #	Q8TCS2; Q9UGE2; A2AB17; A2BEL6; A2BEL7; A8MQC4

UniProt Related Accession #	Q96PV0
NCBI Official Full Name	Ras/Rap GTPase-activating protein SynGAP
NCBI Official Synonym Full Names	synaptic Ras GTPase activating protein 1
NCBI Official Symbol	SYNGAP1
NCBI Official Synonym Symbols	MRD5; RASA1; RASA5; SYNGAP
UniProt Protein Name	Ras/Rap GTPase-activating protein SynGAP
UniProt Synonym Protein Names	Neuronal RasGAP; Synaptic Ras GTPase-activating protein 1; Synaptic Ras-GAP 1
Protein Family	Ras/Rap GTPase-activating protein
UniProt Gene Name	SYNGAP1
UniProt Synonym Gene Names	KIAA1938; Synaptic Ras-GAP 1
UniProt Entry Name	SYGP1_HUMAN
NCBI Protein Information	ras/Rap GTPase-activating protein SynGAP; neuronal RasGAP; Ras GTPase-activating protein SynGAP; synaptic Ras GTPase-activating protein 1; synaptic Ras GTPase activating protein, 135kDa; synaptic Ras GTPase activating protein 1 homolog
NCBI Summary for SYNGAP1	The protein encoded by this gene is a major component of the postsynaptic density (PSD), a group of proteins found associated with NMDA receptors at synapses. The encoded protein is phosphorylated by calmodulin-dependent protein kinase II and dephosphorylated by NMDA receptor activation. Defects in this gene are a cause of mental retardation autosomal dominant type 5 (MRD5). [provided by RefSeq, Dec 2009]
UniProt Comments for SYNGAP1	SynGAP: an excitatory synapse-specific RasGAP. Member of the NMDAR signaling complex in excitatory synapses it may play a role in NMDAR-dependent control of AMPAR potentiation and synaptic plasticity. ERK activation is up-regulated in neurons from SynGAP knockout mice, whereas P38 MAPK function is depressed. May play a critical role in the regulation of neuronal MAPK signaling, AMPAR membrane trafficking, and excitatory synaptic transmission. Interacts with CAMK2A/CAMK2B and MPDZ. Phosphorylated by CaM-kinase II. Dephosphorylated upon NMDA receptor activation or SYNGAP1/MPDZ complex disruption. Contains a PH domain and a Ras-GAP domain. Two alternatively spliced isoforms have been described. Protein type: GAPs, Ras; GAPs Chromosomal Location of Human Ortholog: 6p21.3 Cellular Component: cytoplasm; dendritic shaft Molecular Function: SH3 domain binding Biological Process: regulation of long-term neuronal synaptic plasticity; regulation of MAPKKK cascade; regulation of synapse structure and activity; Ras protein signal transduction; dendrite development; regulation of synaptic plasticity; visual learning; negative regulation of Ras protein signal transduction; negative regulation of axonogenesis; negative regulation of neuron apoptosis; pattern specification process; receptor clustering Disease: Mental Retardation, Autosomal Dominant 5
Research Articles on SYNGAP1	**1.** Reduced cognition in mutant Syngap1 transgenic mice is caused by isolated damage to developing forebrain neurons.
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