

Product datasheet for **AR51959PU-S**

TrkB (32-429, His-tag) Mouse Protein

Product data:

Product Type:	Recombinant Proteins
Description:	TrkB (32-429, His-tag) mouse protein, 50 µg
Species:	Mouse
Expression Host:	Insect
Expression cDNA Clone or AA Sequence:	CPTSCKCSSA RIWCTEPPSPG IVAFPRLEPN SVDPENITEI LIANQKRLEI INEDDVEAYV GLRNLTIVDS GLKFVAYKAF LKNSNLRHIN FTRNKLTSLR RRHFRHLDLS DLILTGNPFT CSCDIMWLKT LQETKSSPDT QDLYCLNESS KNMPLANLQI PNCGLPSARL AAPNLVVEEG KSVTLSCSVG GDPLPTLYWD VGNLVSKHMN ETSHTQGSLR ITNISSDDSG KQISCVAENL VGEDQDSVNL TVHFAPTITF LESPTSDHHW CIPFTVRGNP KPALQWFYNG AILNESKYIC TKIHVTNHT EYHGCLQLDNP THMNNGDYTL MAKNEYGKDE RQISAHFMGR PGVDYETNPN YPEVLYEDWT TPTDIGDTTN KSNEIPSTDV ADQSNREHAA ALEHHHHHHH
Tag:	His-tag
Predicted MW:	45.7 kDa
Concentration:	lot specific
Purity:	>95% by SDS - PAGE
Buffer:	Presentation State: Purified State: Liquid purified protein Buffer System: Phosphate Buffered Saline (pH 7.4) containing 10% glycerol.
Endotoxin:	< 1.0 EU per 1 microgram of protein (determined by LAL method)
Preparation:	Liquid purified protein
Storage:	Store undiluted at 2-8°C for one week or (in aliquots) at -20°C to -80°C for longer. Avoid repeated freezing and thawing.
Stability:	Shelf life: one year from despatch.
RefSeq:	NP_001020245
Locus ID:	18212
UniProt ID:	P15209
Cytogenetics:	13 31.2 cM
Synonyms:	GP145-TrkB/GP95-TrkB; Tkrb; trk-B; trkB



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Summary:

Receptor tyrosine kinase involved in the development and the maturation of the central and the peripheral nervous systems through regulation of neuron survival, proliferation, migration, differentiation, and synapse formation and plasticity. Receptor for BDNF/brain-derived neurotrophic factor and NTF4/neurotrophin-4. Alternatively can also bind NTF3/neurotrophin-3 which is less efficient in activating the receptor but regulates neuron survival through NTRK2. Upon ligand-binding, undergoes homodimerization, autophosphorylation and activation. Recruits, phosphorylates and/or activates several downstream effectors including SHC1, FRS2, SH2B1, SH2B2 and PLCG1 that regulate distinct overlapping signaling cascades. Through SHC1, FRS2, SH2B1, SH2B2 activates the GRB2-Ras-MAPK cascade that regulates for instance neuronal differentiation including neurite outgrowth. Through the same effectors controls the Ras-PI3 kinase-AKT1 signaling cascade that mainly regulates growth and survival. Through PLCG1 and the downstream protein kinase C-regulated pathways controls synaptic plasticity. Thereby, plays a role in learning and memory by regulating both short term synaptic function and long-term potentiation. PLCG1 also leads to NF-Kappa-B activation and the transcription of genes involved in cell survival. Hence, it is able to suppress anoikis, the apoptosis resulting from loss of cell-matrix interactions. Isoform GP95-TRKB may also play a role in neurotrophin-dependent calcium signaling in glial cells and mediate communication between neurons and glia. [UniProtKB/Swiss-Prot Function]

Product images: