Recombinant Protein Technical Manual

Recombinant Rat TrkA/NTRK1 Protein (His Tag)(Active)

RPES4355

Product Data:

Product SKU: RPES4355

Size: 50µg

Species: Rat

Expression host: HEK293 Cells

Uniprot: NP_067600.1

Protein Information:

Molecular Mass:	43.7 kDa
AP Molecular Mass:	67-77 kDa
Tag:	C-His
Bio-activity:	Measured by its ability to inhibit NGF-induced proliferation of TF-1 human erythroleukemic cells. The ED50 for this effect is typically 0.2-0.8 µg/mL in the presence of 10 ng/mL of recombinant mouse NGF.
Purity:	> 95 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU per µg of the protein as determined by the LAL method
Storage:	Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping:	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation:	Lyophilized from sterile PBS, pH 7.4
Reconstitution:	Please refer to the printed manual for detailed information.
Application:	
Synonyms:	NTRK1;Trk;Trka

Immunogen Information:

Sequence: Met1-Pro418

Background:

TRKA is a member of the neurotrophic tyrosine kinase receptor (NTKR) family. It is a membrane-bound receptor that, upon neurotrophin binding, phosphorylates itself and members of the MAPK pathway. Isoform TrkA-III promotes angiogenesis and has oncogenic activity when overexpressed. Isoform TrkA-I is found in most non-neuronal tissues. Isoform TrkA-II is primarily expressed in neuronal cells. TrkA-III is specifically expressed by pluripotent neural stem and neural crest progenitors. The presence of NTRK1 leads to cell differentiation and may play a role in specifying sensory neuron subtypes. Mutations in TRKA gene have been associated with congenital insensitivity to pain, anhidrosis, self-mutilating behavior, mental retardation and cancer. It was originally identified as an oncogene as it is commonly mutated in cancers, particularly colon and thyroid carcinomas. TRKA is required for high-affinity binding to nerve growth factor (NGF), neurotrophin-3 and neurotrophin-4/5 but not brain-derived neurotrophic factor (BDNF). Known substrates for the Trk receptors are SHC1, PI 3-kinase, and PLC-gamma. NTRK1 has a crucial role in the development and function of the nociceptive reception system as well as establishment of thermal regulation via sweating. It also activates ERK1 by either SHC1- or PLC-gamma-dependent signaling pathway. Defects in NTRK1 are a cause of congenital insensitivity to pain with anhidrosis and thyroid papillary carcinoma.

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