Human TrkA Alexa Fluor® 647-conjugated Antibody

Monoclonal Mouse IgG_1 Clone # 994307

Catalog Number: FAB1752R

100 µg

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human TrkA in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 994307
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant human TrkA Ala33-Glu407 Accession # P04629
Conjugate	Alexa Fluor 647 Excitation Wavelength: 650 nm Emission Wavelength: 668 nm
Formulation	Supplied 0.2 mg/mL in a saline solution containing BSA and Sodium Azide. See Certificate of Analysis for details. *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Flow Cytometry	0.25-1 µg/10^6 cells	HEK293 Human Cell Line Transfected with Human TrkA and eGFP

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	**Protect from light. Do not freeze.** • 12 months from date of receipt, 2 to 8 °C as supplied.

BACKGROUND

Trk A, the product of the proto-oncogene *trk,* is a member of the neurotrophic tyrosine kinase receptor family that has three members. Trk A, Trk B and Trk C preferentially bind NGF, NT-4 and BDNF, and NT-3, respectively. All Trk family proteins share a conserved complex subdomain organization consisting of a signal peptide, two cysteine-rich domains, a cluster of three leucine-rich motifs, and two immunoglobulin-like domains in the extracellular region, as well as an intracellular region that contains the tyrosine kinase domain. Two distinct Trk A isoforms that differ by virtue of a 6-amino acid insertion in their extracellular domain have been identified. The longer Trk A isoform is the only isoform expressed within neuronal tissues whereas the shorter Trk A is expressed mainly in non-neuronal tissues. NGF binds to Trk A with low affinity and activates its cytoplasmic kinase, initiating a signaling cascade that mediates neuronal survival and differentiation. Higher affinity binding of NGF requires the coexpression of Trk A with the p75 NGF receptor (NGFR), a member of the tumor necrosis factor receptor superfamily. NGFR binds all neurotrophins with low affinity and modulates Trk activity as well as alters the specificity of Trk receptors for their ligands. NGFR can also mediate cell death when expressed independent of Trk.

References:

1. Esposito, D. *et al.* (2001) J. Biol. Chem. **276**:32687.
2. Sofroniew, M.V. *et al.* (200) Annu. Rev. Neurosci. **24**:1217.

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