

Product Information

Anti-TrkB

produced in goat, affinity isolated antibody

Catalog Number **T1941**

Product Description

Anti-TrkB is produced in goat using as immunogen recombinant human TrkB, extracellular domain, expressed in NSO cells. The antibody is purified using human TrkB affinity chromatography.

Anti-TrkB will recognize recombinant human TrkB by immunoblotting. The antibody shows no cross-reactivity with TrkC, NT-3, NT-4, BDNF, and β -NGF.

Neurotrophins activate tyrosine kinase receptors of the trk family (trkA, trkB and trkC) and they all share a common low affinity receptor (p75^{NTR} or p75).¹⁻³ Although p75^{NTR} does not appear to directly transduce NGF signals, this receptor appears to increase the responsiveness of the trk receptors and plays a role in the retrograde transport of neurotrophin signals from axon terminals to the cell body.³ The expression of *trk* gene neurotrophin receptors in mouse was tabulated.¹ NGF binds with high affinity and activates the TrkA tyrosine kinase receptor, which is apparently responsible for signal transduction. BDNF activates the TrkB tyrosine kinase receptor, which it shares with NT-4. NT-3 activates the TrkC tyrosine kinase receptor, but can also activate TrkA and TrkB receptors in certain cell systems. NT-4 primarily activates the TrkB tyrosine kinase receptor, which it shares with BDNF.^{1,4}

Reagent

Supplied lyophilized from a 0.2 μ m filtered solution of phosphate buffered saline containing 5% trehalose.

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

To a vial of lyophilized powder, add 1 mL of 0.2 μ m filtered PBS to produce a 0.1 mg/mL stock solution. If aseptic technique is used, no further filtration should be needed for use in cell culture environments.

Storage/Stability

Prior to reconstitution, store at -20°C . Reconstituted product may be stored at $2-8^{\circ}\text{C}$ for up to one month. For prolonged storage, freeze in working aliquots at -20°C . Avoid repeated freezing and thawing

Product Profile

Flow Cytometry: This antibody can be used at 2.5 $\mu\text{g}/\text{mL}/10^6$ cells to detect human TrkB

Immunoblotting: This antibody can be used at 0.25-0.5 $\mu\text{g}/\text{ml}$ to detect human, mouse, and rat TrkB

Note: In order to obtain best results in different techniques and preparations we recommend determining optimal working dilutions by titration test.

References

1. Barbacid, M., The Trk family of neurotrophin receptors, *J. Neurosci.*, **25**, 1386-1403 (1994).
2. Barker, P.A., The neurotrophin receptors, in *Guidebook to Cytokines and Their Receptors*, Nicola, N., ed., Oxford Press (New York, N.Y.: 1994), pp. 143-146.
3. Barker, P.A., Nerve growth factor and the low-affinity neurotrophin receptor, in *Neurotrophins and the Neural Crest*, Sieber-Blum, M., ed., CRC (Boca Raton, FL: 1999), pp. 59-93.
4. Callard, R., and Gearing, A., *The Cytokine Facts Book*, Academic Press (New York, N.Y.: 1994).

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