

## DESCRIPTION

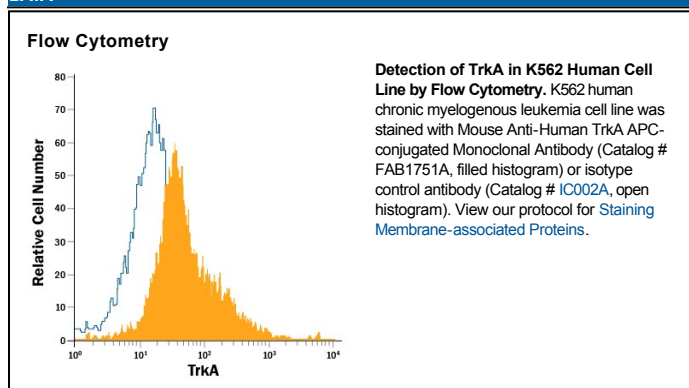
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human TrkA in direct ELISAs. In direct ELISAs, this antibody does not cross-react with recombinant rat TrkA, recombinant human (rh) TrkB, or rhTrkC.
<b>Source</b>	Monoclonal Mouse IgG <sub>1</sub> Clone # 165131
<b>Purification</b>	Protein A or G purified from hybridoma culture supernatant
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human TrkA Ala33-Glu407 Accession # P04629
<b>Conjugate</b>	Allophycocyanin Excitation Wavelength: 620-650 nm Emission Wavelength: 660-670 nm
<b>Formulation</b>	Supplied 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
<b>Flow Cytometry</b>	10 $\mu$ L/10 <sup>6</sup> cells	See Below

## DATA



## PREPARATION AND STORAGE

<b>Shipping</b>	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
<b>Stability &amp; Storage</b>	<b>Protect from light. Do not freeze.</b> <ul style="list-style-type: none"> <li>12 months from date of receipt, 2 to 8 °C as supplied.</li> </ul>

## BACKGROUND

TrkA, the product of the proto-oncogene *trk*, is a member of the neurotrophic tyrosine kinase receptor family that has three members. TrkA, TrkB, and TrkC. TrkA binds NGF and NT-3, while TrkB binds NT-4 and BDNF, and TrkC binds NT-3. All Trk family proteins share a conserved complex subdomain organization consisting of two cysteine-rich segments, a cluster of three leucine-rich motifs, and two immunoglobulin-like domains in the extracellular region, coupled to an intracellular region that contains a tyrosine kinase domain. Two distinct TrkA isoforms that differ by virtue of a 6-amino acid (aa) insertion after Pro392 in their extracellular domain have been identified. The longer TrkA isoform is the only isoform expressed within neuronal tissues, whereas the shorter TrkA is expressed mainly in non-neuronal tissues. A third TrkA variant is expressed by neural stem cells. This isoform shows a Val substitution for aa 194-283 and an absence of the aforementioned 6 aa insert. NGF binds to TrkA 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 TrkA with the p75 NGF receptor (NGF R), a member of the tumor necrosis factor receptor superfamily. NGF R binds all neurotrophins with low affinity and modulates Trk activity as well as alters the specificity of Trk receptors for their ligands. NGF R can also mediate cell death when expressed independent of Trk. Over aa 33-407, human TrkA shares 79% aa sequence identity with mouse TrkA.