

Monoclonal Anti-human NGF R/TNFRSF16-Alexa Fluor® 700

Catalog Number: FAB367N

Lot Number: ADJF01

100 Tests

Reagents Provided

Alexa Fluor® 700-conjugated mouse monoclonal anti-human NGF R/TNFRSF16: Supplied as 50 µg of antibody in 0.5 mL saline containing up to 0.5% BSA and 0.09% sodium azide.

Clone #: 74902

Isotype: mouse IgG₁

Reagents Not Provided

- Flow Cytometry Staining Buffer (Catalog # FC001) or other BSA-supplemented saline buffer.

Storage

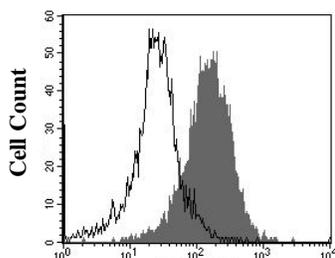
Reagents are stable for **twelve months** from the date of receipt when stored in the dark at 2-8 °C.

Intended Use

Designed to quantitatively determine the percentage of cells bearing NGF R/TNFRSF16 within a population and qualitatively determine the density of NGF R/TNFRSF16 on cell surfaces by flow cytometry.

Product Description

This antibody was produced from a hybridoma resulting from the fusion of a mouse myeloma with B cells obtained from a mouse immunized with Sf 21-derived recombinant human Nerve Growth Factor Receptor (rhNGF R). The IgG fraction of the tissue culture supernatant was purified by Protein G affinity chromatography. The purified antibody was then conjugated to Alexa Fluor® 700 fluorochrome. Cell surface expression of NGF R/TNFRSF16 is determined by flow cytometry using 675-700 nm wavelength excitation range and monitoring emitted fluorescence with a detector optimized to collect peak emissions at around 723 nm.



NGF R/TNFRSF16-Alexa Fluor® 700

SHSY-5Y cells were stained with Alexa Fluor® 700-conjugated anti-human NGF R/TNFRSF16 (Catalog # FAB367N; filled histogram) or Alexa Fluor® 700-conjugated isotype control (Catalog # IC002N; open histogram).

Legal

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Background Information

NGF R is a type I transmembrane protein that belongs to the tumor necrosis factor receptor family and has been designated TNFRSF16.¹ This receptor is also known as p75 NTR (neurotrophin receptor) because of its ability to bind at low affinity not only to NGF but also to other neurotrophins including Brain-Derived Neurotrophic Factor (BDNF), Neurotrophin-3, and Neurotrophin-4/5. NGF R is a 75 kDa protein that is expressed in neuronal axons, Schwann cells, and perineural cells of peripheral nerves.¹ Neural crest stem cells have been isolated based on their surface expression of NGF R.^{2,3} In addition, neuroepithelial-derived NGF R positive cells have also been demonstrated to be able to differentiate into neurons, smooth muscle, and Schwann cells in culture.⁴ Recently, NGF R has been used as a marker to identify mesenchymal precursors as well as hepatic stellate cells.^{5,6}

References

- Barker, P.A. *et al.* (1992) *Mol. Cell Biochem.* **110**:1.
- Stemple, D.L. *et al.* (1992) *Cell* **71**:973.
- Morrison, S.J. *et al.* (1999) *Cell* **96**:737.
- Mujtaba, T. *et al.* (1998) *Dev. Biol.* **200**:1.
- Campagnolo, L. *et al.* (2001) *Biol. Reprod.* **64**:464.
- Cassiman, D. *et al.* (2001) *Hepatology* **33**:148.

Flow Cytometry Validation

This antibody has been tested for flow cytometry using human SHSY-5Y cells.

- Cells may be Fc-blocked with 1 µg of human IgG/10⁵ cells for 15 minutes at room temperature. Do not wash excess blocking IgG from this reaction.
- After blocking, 5 µL of conjugated antibody was added to up to 1 x 10⁶ cells and incubated for 30 minutes at room temperature.
- Unbound antibody was removed by washing the cells twice in Flow Cytometry Staining Buffer (Catalog # FC001). Note that whole blood requires a RBC lysis step at this point using Flow Cytometry Human Lyse Buffer (Catalog # FC002).
- The cells were resuspended in Flow Cytometry Staining Buffer for final flow cytometric analysis. As a control for this analysis, cells in a separate tube should be treated with Alexa Fluor® 700-labeled mouse IgG₁ antibody. This procedure may need to be modified, depending upon the cell type and final utilization. Individual users may need to titrate to determine the optimal reagent amount for their specific use.

Warning: Contains sodium azide as a preservative. Sodium azide may react with lead and copper plumbing to form explosive metal azides. Flush with large volumes of water during disposal.