

Product Information

Monoclonal Anti-TWEAK Receptor/Fn-14

Clone TR-22
Purified Mouse Immunoglobulin

T9700

Product Description

Monoclonal Anti-TWEAK Receptor (mouse IgG1 isotype) is derived from the TR-22 hybridoma produced by the fusion of mouse myeloma cells (NS1) and splenocytes from BALB/c mice immunized with a synthetic peptide corresponding to amino acids 39-52 in the N-terminus of human TWEAK receptor. The isotype is determined using a double diffusion immunoassay using Mouse Monoclonal Antibody Isotyping Reagents (Product Code ISO-2).

Monoclonal Anti-TWEAK receptor recognizes human TWEAK receptor by various applications including ELISA, immunoblotting (~ 14 kDa), and flow cytometry.

TNF-like weak inducer of apoptosis (TWEAK) belongs to the tumor necrosis factor (TNF) superfamily of cytokines. TWEAK protein can induce cell death in certain human tumor cell lines, but in other cell types like human endothelial and astrocytes, TWEAK can promote cell proliferation. Furthermore, TWEAK may act as an angiogenic factor *in vivo* with pro-inflammatory properties.^{1, 2} TWEAK receptor (TweakR), cloned from the HUVEC cDNA library, has turned out to be the Fn14 protein (fibroblast growth factor-inducible 14-kDa protein) previously cloned from murine NIH3T3 fibroblasts.¹⁻⁴ Fn14 is a type I transmembrane receptor with a single hydrophobic transmembrane domain, amino terminal signal peptide, and carboxy terminal cytoplasmic domain. Fn14 was not considered as a member of the TNF receptors (TNFR) family, due to its lack of homology to other members of this family of proteins.

TweakR/Fn14 contains only one cysteine-rich domain in the extracellular region, and TNFR-associated factor (TRAF) binding domain. In contrast to other TNFR, Fn14 does not contain a death domain (DD) in the cytoplasmic region of the receptor.¹⁻⁵

TWEAK was shown to induce signal transduction via TweakR/Fn14 that leads to NF κ B activation, cell death, and pro-inflammatory effects. In addition, it was found that Fn14 could induce growth effects in neurons independent of the ligand, TWEAK.⁶

Reagent

The antibody is supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Antibody Concentration: ~ 2 mg/mL

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.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Storage in "frost-free" freezers is also not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

By western blot, a working antibody concentration of 2-4 μ g/mL is recommended using HEK-293 overexpressing TWEAKR cells lysate.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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3. Meighan-Mantha, R.L., et al., *J. Biol. Chem.*, **274**, 33166-33176 (1999).
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6. Tanabe, K., et al., *J. Neurosci.*, **23**, 9675-9686 (2003).

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T9700dat Rev 06/21

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