

Product Information

TRAIL RECEPTOR 2/Fc CHIMERA

Mouse, Recombinant
Expressed in Sf21 insect cells

Product Number **T5819**
Storage Temperature - 20 °C

Synonyms: TRAIL R2/Fc, TNFRSF10B, DR5, TRICK 2, MK

Product Description

A DNA sequence encoding the extracellular domain of mouse TRAIL R2 (amino acid residues 1–177)¹ was fused to the carboxy-terminal Fc region of human IgG₁ via a polypeptide linker. The chimeric protein was expressed by a means of a baculovirus expression system in Sf21 insect cells.

Mouse TRAIL R2 is a member of the type I TNFR superfamily of membrane proteins. Its endogenous ligand is TRAIL (APO-2 ligand).² Mouse TRAIL R2 cDNA encodes a precursor protein composed of 381 amino acid residues that has an extracellular cysteine-rich domain that includes the binding site for bioactive TRAIL, a transmembrane domain and a cytoplasmic death domain.² Human and mouse TRAIL R2 share 49% amino acid sequence homology. The death domains of human TRAIL R1 and TRAIL R2 also share high homology, 76% and 79%, respectively, with the death domain of mouse TRAIL R2. The binding of trimeric TRAIL to TRAIL R2 induces apoptosis, which may require oligomerization of the occupied receptor. Recombinant mouse TRAIL R2/Fc chimera neutralizes the ability of rhTRAIL to induce apoptosis.³ Five receptors for TRAIL have been identified: two death domain-containing receptors, TRAIL R2 and TRAIL R1/DR4, and three decoy receptors that lack death domains, TRAIL R3/DcR1, TRAIL R4/DcR2 and OPG.⁴

Components/Reagents

Recombinant mouse TRAIL R2/Fc chimera is lyophilized from a 0.2 µm filtered solution in phosphate-buffered saline.

Precautions and Disclaimer

For laboratory use only. Not for drug, household or other uses. Please consult the Material Safety Data Sheet for handling recommendations before working with this material.

Storage/Stability

Lyophilized recombinant mouse TRAIL R2/Fc chimera is stable for at least 6 months at -20 °C. Upon reconstitution, this protein can be stored under sterile conditions at 2-8 °C for one month, or at -20 °C for three months without detectable loss of activity. Avoid repeated freeze-thaw cycles.

Product Profile

Mature mouse TRAIL R2 is a disulfide-linked homodimer. Based on N-terminal sequencing, recombinant mouse TRAIL R2/Fc chimera has two cleavage sites during processing, with one sequence starting at Asn⁵³ and the second starting at Arg⁵⁸. These two sequences are present at an equal ratio. The reduced TRAIL R2/Fc chimera monomer has a calculated mass of approximately 40 kDa but migrates in SDS-PAGE under reducing conditions as an approximately 49 kDa protein due to glycosylation.

The activity of recombinant mouse TRAIL R2/Fc chimera is measured by its ability to inhibit apoptosis of mouse L929 cells treated with 20 ng/ml of mouse TRAIL or 12 ng/ml of cross-linked recombinant human TRAIL. The ED₅₀ for this effect is in the range of 3–12 ng/ml.

The purity of recombinant mouse TRAIL R2/Fc chimera is >95% determined by SDS-PAGE with silver staining.

References

1. Wu, G.S., *et al.*, Cancer Research, **59**, 2770-2775 (1999).
2. Chaudhary P.M., *et al.*, Immunity, **7**, 821-830 (1997).
3. Walczak, H., *et al.*, EMBO J., **16**, 5386-5397 (1997).
4. Golstein, P., Curr. Biol., **7**, R750–R753 (1997).

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