

Product Information

Tie-2/Fc Chimera

Mouse, Recombinant
Expressed in mouse NSO cells

Product Number **T3448**

Product Description

Recombinant Mouse Tie-2/Fc Chimera is produced from a DNA sequence encoding amino acids 1-744 of the extracellular domain of mouse Tie-2¹ fused to the Fc region of human IgG1 by a polypeptide linker. Based on N-terminal sequencing, the recombinant mouse Tie-2/Fc protein has Ala 23 at the amino-terminus. The reduced mouse Tie-2 monomer has a calculated molecular mass of approximately 107.2 kDa. As a result of glycosylation, the protein migrates to 125-135 kDa in SDS-PAGE under reducing conditions.

Tie-1/Tie (tyrosine kinase with Ig and EGF homology domains 1) and Tie-2/Tek define a new class of the receptor tyrosine kinase (RTK) subfamily with unique structural characteristics: two immunoglobulin-like domains flanking three epidermal growth factor (EGF)-like domains followed by three fibronectin type III-like repeats in the extracellular region and a split tyrosine kinase domain in the cytoplasmic region.²

Tie-1 and Tie-2, expressed primarily on endothelial and hematopoietic progenitor cells, play important roles in angiogenesis, vasculogenesis, and hematopoiesis.³⁻⁵ Two ligands that bind Tie-2 with high affinity are angiopoietin-1 and angiopoietin-2. Proliferation in developing hematopoietic cells is enhanced by the adhesion of Tie-2⁺ cells induced by angiopoietin-1.⁵ Tie also plays a role in the survival and integrity of the endothelium.⁶ Mouse Tie-2 is located on chromosome 4.¹

Reagent

Recombinant Mouse Tie-2/Fc Chimera is supplied as approximately 100 µg of protein lyophilized from a 0.2 µm filtered solution in phosphate buffered saline.

Preparation Instructions

Reconstitute the contents of the vial using sterile phosphate-buffered saline (PBS) containing at least 0.1% human serum albumin or bovine serum albumin. Prepare a stock solution of at least 100 µg/ml.

Storage/Stability

Store at -20 °C. Upon reconstitution, the product may be stored at 2 °C to 8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing is not recommended. Do not store in a frost-free freezer.

Product Profile

Recombinant Mouse Tie-2/Fc Chimera is measured by its ability to bind recombinant human angiopoietin-2. By ELISA, immobilized recombinant mouse Tie-2/Fc Chimera at 4 µg/ml (100 µl/well) can bind recombinant human angiopoietin-2 with a linear range of 2-50 ng/ml.

Purity: >90% as determined by SDS-PAGE, visualized by silver stain.

Endotoxin level is < 0.1 ng/µg cytokine as determined by the LAL (Limulus amoebocyte lysate) method.

References

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3. Sato, T.N., et al., Distinct roles of the receptor tyrosines Tie-1 and Tie-2 in blood vessel formation. *Nature*, **376**, 70-74 (1995).

4. Sato, T.N., et al., Tie-1 and Tie-2 define another class of putative receptor tyrosine kinase genes expressed in early embryonic vascular system. Proc. Natl. Acad. Sci. USA, **90**, 9355-9358 (1993).
5. Takakura, N., et al., Critical role of the TIE2 endothelial cell receptor in the development of definitive hematopoiesis. Immunity, **9**, 677-686 (1998).
6. Puri, M.C., et al., The receptor tyrosine kinase Tie is required for integrity and survival of vascular endothelial cells. EMBO J, **14**, 5884-5891 (1995).

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