# Mer EXTRACELLULAR DOMAIN/Fc CHIMERA

Human, Recombinant
Expressed in S*f*21 insect cells

Product Number **M 1314**

## ProductInformation

### Product Description

Recombinant human Mer extracellular domain/Fc chimera consists of amino acid residues 1 - 499 [1] that was fused by means of a polypeptide linker to the C-terminal Fc portion of human IgG1. The chimeric protein is expressed in baculovirus infected S*f*21 insect cells. Recombinant Mer is a disulfide-linked homodimer. The amino terminus is Arg 26 based on N-terminal sequencing. The calculated molecular mass of the reduced monomer is approximately 78.9 kDa, but as a result of glycosylation, it migrates as an approx. 100-110 kDa protein on reducing SDS-PAGE.

Mer, along with Axl and Dtk, is a member of the receptor tyrosine kinase family.[2,3] The Mer extracellular domain is composed of two Ig-like motifs and two fibronectin type III motifs.[1,4] The known ligands are Protein S and Gas6 (growth-arrest specific protein).[2-6] Protein S is an anti-coagulation factor and also plays a role in mitogenesis.[3] The binding affinity for Gas6 is in the order of Axl>Dtk>Mer. Mer and its ligand Gas6 induce downstream signaling pathways that affect cell proliferation, migration, and prevent apoptosis. They may also be involved in the immune, reproductive, and vascular systems.[3-7] Mer is expressed at high levels in epithelial and reproductive tissues as well as in monocytes. Over-expression is associated with lymphoid malignancies.[7]

### Reagent

Recombinant human extracellular Mer/Fc chimera is supplied as approx. 100 µg of protein lyophilized from a sterile filtered phosphate-buffered saline (PBS) solution.

### Preparation Instructions

Reconstitute the vial contents with sterile PBS containing at least 0.1% human or bovine serum albumin. Stock solution concentration should be no less than 50 µg/ml.

### Storage/Stability

Lyophilized samples are stable for more than six months at –20 °C to –70 °C. Upon reconstitution, store at 2-4 °C for up to one month. Store in working aliquots at –20 °C for up to three months. Repeated freeze-thaw cycles should be avoided. Do not store in a frost-free freezer.

### Product Profile

Human Mer/Fc chimera activity is measured by its ability to bind rhGas6 in a functional ELISA assay. Immobilized human Mer/Fc chimera (10µg/ml, 100 µl/well) binds recombinant human Gas6 with a linear range of 100-5 ng/ml. Optimal dilutions should be determined by each laboratory for each application.

Purity: >90% by SDS-PAGE, visualized by silver stain.
Endotoxin level: < 0.1 ng/µg of protein as determined by the LAL (Limulus amebocyte lysate) method.

### References


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3. Lu, Q. and Lemke, G., Homeostatic regulation of the immune system by receptor tyrosine kinase of the Tyro 3 family., Science, **293**, 306-311 (2001).
4. Prieto, A.L., et al., Expression of the receptor protein-tyrosine kinases Tyro-3, Axl, and Mer in the developing rat central nervous system. J. Comp. Neurol., **425**, 295-314 (2000).

5. Chen, J., et al., Identification of Gas6 as a ligand for Mer, a neural cell adhesion molecule related receptor tyrosine kinase implicated in cellular transformation., Oncogene, **14**, 2033-2039 (1997).
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LCM 10/01