

## Product Information

### Dtk/Fc CHIMERA

Human, Recombinant  
Expressed in mouse NSO cells

Product Number **D 0315**

Synonyms: Tyro3, Sky, Rse, Brt, tif

### Product Description

Recombinant human Dtk/Fc chimera consists of the extracellular domain of human Dtk (amino acid residues Met 1 - Ser 428)<sup>1</sup> fused by means of a polypeptide linker to the Fc portion of human IgG1 that is 6 histidine-tagged at the carboxyl terminus. The chimeric protein is expressed in a mouse myeloma cell line, NSO. Recombinant Dtk is a disulfide-linked homodimer. N-terminal sequencing indicates the amino terminus is Ala 41. The calculated molecular mass of the reduced protein is approximately 69 kDa, but as a result of glycosylation, the recombinant Dtk/Fc chimera migrates as an approximately 100 - 110 kDa protein on reducing SDS-PAGE.

Dtk, along with Axl and Mer, is a member of the receptor tyrosine kinase family.<sup>2,3,4</sup> The known ligands are Protein S and Gas6.<sup>3,4,5,6</sup> The binding affinity for Gas6 is in the order of Axl>Dtk>Mer. Protein S is an anti-coagulation factor and also plays a role in mitogenesis.<sup>3,5,6</sup> The Dtk extracellular domain is composed of two Ig-like motifs and two fibronectin type III motifs.<sup>1,4</sup> Dtk has been found in high concentrations in embryonic tissues such as stem cells, yolk sac blood islands, para-aortic splanchnopleural mesoderm, and liver and thymus tissues. In adults, Dtk is expressed primarily in brain and endothelial tissues. Dtk and its ligand Gas6 induce downstream signaling pathways that affect cell proliferation, migration, and apoptosis. There is also strong evidence that Dtk plays an essential role in the immune, reproductive, and vascular systems.<sup>3,4,6,7</sup>

### Reagent

Recombinant human Dtk/Fc chimera is supplied as approximately 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 serum albumin or BSA. Stock solution concentration should be no less than 50 µg/ml.

### Storage/Stability

Lyophilized samples are stable for at least six months at -20 °C to -70 °C. Upon reconstitution, store at 2 to 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

Recombinant human Dtk/Fc chimera is measured for its ability to bind rhGas6 in a functional ELISA assay in which Dtk/Fc is immobilized at 2 µg/ml (100 µl/well). Immobilized Dtk/Fc binds recombinant human Gas6 with a linear range of 100 - 2 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 amoebocyte lysate) method.

### References

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2. Crosier, K.E. and Crosier, P.S., New insights into the control of cell growth; the role of the Axl family. *Pathology*, **29**, 131-135 (1997).
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7. Demarchi, F., et al., Gas6 anti-apoptotic signaling requires NF-kappa B activation. *J. Biol. Chem.*, **276**, 31738-31744 (2001).

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