Data Sheet (Cat.No.TMPY-00930)

TargetMol

TIE2 Protein, Human, Recombinant (His & hFc)

General Information

Synonyms:	VMCM1;TIE2;CD202B;TEK tyrosine kinase, endothelial;TIE-2;VMCM
Protein Construction:	A DNA sequence encoding the extracellular domain (Met1-Lys745) of human Tie2 (AAA61139.1) precursor was fused with the C-terminal polyhistidine-tagged Fc region of human IgG1 at the C-terminus. Predicted N terminal: Ala 23
Species:	Human
Expression Host:	HEK293 Cells
Accession:	AAA61139.1
Molecular Weight:	108.5 kDa (predicted); 130.7 kDa (reducing condition, due to glycosylation)

QC Testing

Biological Activity:	Measured by its binding ability in a functional ELISA. Immobilized recombinant human Angiopoietin-2 at 10 μg/ml (100 μl/well) can bind Human Tie2 / CD202b Protein (ECD, His & Fc Tag) with a range of 0.2-20 μg/ml.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstituted with sterile deionized water to 0.25 mg/mL. Reconstitution conditions may vary depending on the lot.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

TEK, or TIE-2, is an endothelial cell-specific receptor tyrosine kinase (RTK) that is known as a functioning molecule of vascular endothelial cells. TEK comprises a subfamily of RTK with TIE, and these two receptors play critical roles in vascular maturation, maintenance of integrity and remodeling. Targeted mutagenesis of both Tek and its

agonistic ligand, Angiopoietin-1, result in embryonic lethality, demonstrating that the signal transduction pathways mediated by this receptor are crucial for normal embryonic development. TEK signaling is indispensable for the development of the embryonic vasculature and suggests that TEK signaling may also be required for the development of the tumor vasculature.

Reference

Jones N, et al. (1998) The Tek / Tie2 receptor signals through a novel Dok-related docking protein, Dok-R. Oncogene. 17(9): 1097-108.

Sato A, et al. (1998) Characterization of TEK receptor tyrosine kinase and its ligands, Angiopoietins, in human hematopoietic progenitor cells. Int Immunol. 10(8): 1217-27.

Huang L, et al. (1995) GRB2 and SH-PTP2: potentially important endothelial signaling molecules downstream of the TEK / TIE2 receptor tyrosine kinase. Oncogene. 11(10): 2097-103.