

Human Tie1 Protein (His Tag)

Catalog Number: 10509-H08H



Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

JTK14; TIE

Protein Construction:

A DNA sequence encoding the extracellular domain of human TIE1 (NP_005415.1) (Met 1-Gln 760) was expressed, with a C-terminal polyhistidine tag.

Source: Human

Expression Host: HEK293 Cells

QC Testing

Purity: > 90 % as determined by SDS-PAGE

Endotoxin:

< 1.0 EU per µg of the protein as determined by the LAL method

Stability:

Samples are stable for up to twelve months from date of receipt at -70 °C

Predicted N terminal: Ala 22

Molecular Mass:

The secreted recombinant human TIE1 comprises 750 amino acids with a predicted molecular mass of 81.4 kDa. The apparent molecular mass of rhTIE1 is approximately 80-90 kDa in SDS-PAGE under reducing conditions.

Formulation:

Lyophilized from sterile 20 mM Tris, 0.5 M NaCl, 10 % Sucrose, pH 8.2

Normally 5 % - 8 % trehalose, mannitol and 0.01% Tween80 are added as protectants before lyophilization. Specific concentrations are included in the hardcopy of COA. Please contact us for any concerns or special requirements.

Usage Guide

Storage:

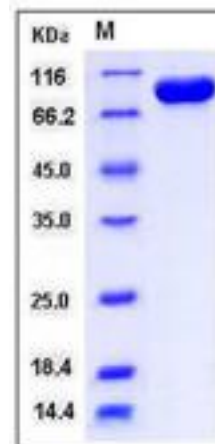
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Tyrosine kinase with immunoglobulin-like and EGF-like domains 1 also known as Tie1 is an angiopoietin receptor and is an orphan receptor tyrosine kinase that is expressed almost exclusively in endothelial cells and that is required for normal embryonic vascular development. The receptor tyrosine kinase Tie1 is expressed primarily in vascular endothelial cells. The receptor has also been detected in epithelial tumours in breast, thyroid and gastric cancers and in tumour cell lines where it appears as a 45 kDa truncated receptor fragment. Tie1 promotes endothelial cell survival, but other studies have suggested that the Tie1 kinase has little to no activity. Embryos deficient in Tie1 failed to establish structural integrity of vascular endothelial cells, resulting in oedema and subsequently localized haemorrhage. Tie1 is significantly higher in human aortic endothelial cells than in human umbilical vein endothelial cells. Additionally, attachment of cells of monocytic lineage to endothelial cells is also enhanced by Tie1 expression. Collectively Tie1 has a proinflammatory property and may play a role in the endothelial inflammatory diseases such as atherosclerosis.

References

- 1.Chan B, *et al.* (2008) Receptor tyrosine kinase Tie-1 overexpression in endothelial cells upregulates adhesion molecules. *Biochem Biophys Res Commun.* 371(3): 475-9.
- 2.Sato TN, *et al.* (1995) Distinct roles of the receptor tyrosine kinases Tie-1 and Tie-2 in blood vessel formation. *Nature.* 376(6535): 70-4.
- 3.Rees KA, *et al.* (2007) The receptor tyrosine kinase Tie1 is expressed and activated in epithelial tumour cell lines. *Int J Oncol.* 31(4): 893-7.

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