

# Rat Tie2 / TEK Protein (Fc Tag)

Catalog Number: 80063-R02H



Sino Biological  
Biological Solution Specialist

## General Information

### Gene Name Synonym:

TEK

### Protein Construction:

A DNA sequence encoding the rat TEK (NP\_001099207.1) extracellular domain (Met 4-Leu 743) was fused with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

## QC Testing

Purity: > 95 % as determined by SDS-PAGE

### Bio Activity:

1. Measured by its binding ability in a functional ELISA. 2. Immobilized S1h-3C-mANGPT2 (Cat:50298-M07H) at 10 µg/mL (100 µL/well) can bind ratTEK-Fc. The EC<sub>50</sub> of ratTEK-Fc is 0.26-0.62µg/mL.

### 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 23

### Molecular Mass:

The recombinant rat TEK/Fc is a disulfide-linked homodimer. The reduced monomer comprises 962 amino acids and predicts a molecular mass of 108 kDa. The apparent molecular mass of the rat TEK/Fc monomer is approximately 120-130 kDa in SDS-PAGE under reducing conditions due to glycosylation.

### Formulation:

Lyophilized from sterile PBS, pH 7.4

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:

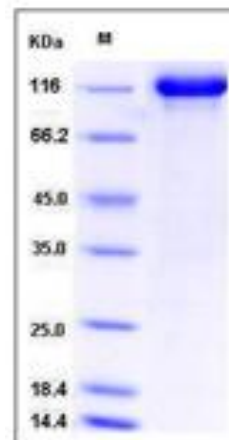
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

### Reconstitution:

Detailed reconstitution instructions are sent along with the products.

## SDS-PAGE:



## Protein Description

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.

## References

1. Jones N, *et al.* (1998) The Tek / Tie2 receptor signals through a novel Dok-related docking protein, Dok-R. *Oncogene*. 17(9): 1097-108. 2. 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. 3. 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.

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