Rat DDR2 Kinase / CD167b Protein (Fc Tag)

Catalog Number: **80341-R02H**

Sino Biological
Biological Solution Specialist

General Information

Gene Name Synonym:

DDR2

Protein Construction:

A DNA sequence encoding the rat DDR2 (B1WC09) (Met1-Arg399) was expressed, fused with the Fc region of human IgG1 at the C-terminus.

Source: Rat

Expression Host: HEK293 Cells

QC Testing

Purity: > 80 % as determined by SDS-PAGE

Bio Activity:

Measured by its ability to bind with Rat tail Collagen I in a functional ELISA.

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 ℃

Predicted N terminal: Gln 24

Molecular Mass:

The recombinant rat DDR2/Fc is a disulfide-linked homodimer. The reduced monomer comprises 617 amino acids and has a predicted molecular mass of 69.5 kDa. The apparent molecular mass of the protein is approximately 110 kDa in SDS-PAGE under reducing conditions.

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:

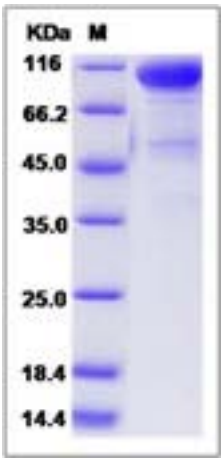
Store it under sterile conditions at -20℃ to -80℃ upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

Discoidin domain receptor 2 (DDR2) or CD167b (cluster of differentiation 167b) is a kind of protein tyrosine kinases associated with cell proliferation and tumor metastasis, and collagen, identified as a ligand for DDR2, up-regulates matrix metallloproteinase 1 (MMP-1) and MMP-2 expression in cellular matrix. DDR2/CD167b was found to recognise the triple-helical region of collagen X as well as the NC1 domain. Binding to the collagenous region was dependent on the triple-helical conformation. DDR2/CD167b autophosphorylation was induced by the collagen X triple-helical region but not the NC1 domain, indicating that the triple-helical region of collagen X contains a specific DDR2 binding site that is capable of receptor activation. DDR2/CD167b is induced during stellate cell activation and implicate the phosphorylated receptor as a mediator of MMP-2 release and growth stimulation in response to type I collagen. Moreover, type I collagen-dependent upregulation of DDR2/CD167b expression establishes a positive feedback loop in activated stellate cells, leading to further proliferation and enhanced invasive activity.

References

1.Olaso E, et al. (2001) DDR2 receptor promotes MMP-2-mediated proliferation and invasion by hepatic stellate cells. J Clin Invest. 108(9): 1369-78. 2.Zhang W, et al. (2006) Expression of discoidin domain receptor 2 (DDR2) extracellular domain in pichia pastoris and functional analysis in synovial fibroblasts and NIT3T3 cells. Mol Cell Biochem. 290(1-2): 43-53. 3.Leitinger B, et al. (2006) The discoidin domain receptor DDR2 is a receptor for type X collagen. Matrix Biol. 25(6): 355-64.