

Human DDR2 Kinase / CD167b Protein (Fc Tag)

Catalog Number: 10209-H02H



Sino Biological Inc.
Biological Solution Specialist

General Information

Gene Name Synonym:

MIG20a; NTRKR3; TKT; TYRO10; AW495251; Ntrkr3; tyro10

Protein Construction:

A DNA sequence encoding the extracellular domain (Met 1-Arg 399) of human DDR2 precursor (NP_001014796.1) was expressed with the fused Fc region of human IgG1 at the C-terminus.

Source: Human

Expression Host: Human Cells

QC Testing

Purity: > 95 % as determined by SDS-PAGE

Bio Activity:

Measured by its binding ability in a functional ELISA. Immobilized Rat tail Collagen I at 10 µg/ml can bind recombinant human DDR2-Fc Chimera with a linear range of 2.5-80 ng/ml. Scatchard analysis showed the affinity constant (Kd) of recombinant human DDR2-Fc Chimera bound to rat tail collagen I was 6.8 nM .

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: Lys 22

Molecular Mass:

The recombinant human DDR2/Fc is a disulfide-linked homodimeric protein. The reduced monomer consists of 616 amino acids and has a calculated molecular mass of 69.4 kDa. Due to glycosylation, rhDDR2/Fc monomer migrates as an approximately 87 kDa protein 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:

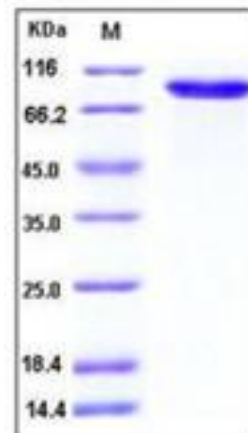
Store it under sterile conditions at -20°C to -80°C upon receiving. Recommend to aliquot the protein into smaller quantities for optimal storage.

Avoid repeated freeze-thaw cycles.

Reconstitution:

Detailed reconstitution instructions are sent along with the products.

SDS-PAGE:



Protein Description

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 metalloproteinase 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

et al.

- 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.

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