

## DDR2 Protein, Human, Recombinant (aa 422-855, His & GST)

### General Information

Synonyms:	discoidin domain receptor tyrosine kinase 2;NTRKR3;CD167;TYRO10;TKT;MIG20a
Protein Construction:	A DNA sequence encoding the human DDR2 (Q16832) (Arg422-Glu855) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	Q16832
Molecular Weight:	77.1 kDa (predicted); 77 kDa (reducing conditions)

### QC Testing

Biological Activity:	The specific activity was determined to be 8 nmol/min/mg using synthetic AXLtide peptide (CKKSRGDYMTMQIG) as substrate.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Supplied as sterile 20 mM Tris, 500 mM NaCl, pH 7.4, 10% glycerol.

### Preparation and Storage

#### Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

#### Stability & Storage:

It is recommended to store the product under sterile conditions at -20°C to -80°C. Samples are stable for up to 12 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

#### Shipping:

Proteins are shipped with blue ice.

### Protein Background

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. Cancer Immunotherapy/Immune Checkpoint Immunotherapy/Targeted Therapy

### Reference

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.

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