



# Recombinant Protein Technical Manual

## Recombinant Mouse DDR2 Kinase/CD167b Protein (His Tag)(Active) RPES2334

### Product Data:

**Product SKU:** RPES2334

**Size:** 50µg

**Species:** Mouse

**Expression host:** HEK293 Cells

**Uniprot:** NP\_072075.2

### Protein Information:

**Molecular Mass:** 44 kDa

**AP Molecular Mass:** 80-90 kDa

**Tag:** C-His

**Bio-activity:** Measured by its ability to bind rat tail Collagen I in a functional ELISA.

**Purity:** > 95 % as determined by SDS-PAGE

**Endotoxin:** < 1.0 EU per µg of the protein as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile PBS, pH 7.4

**Reconstitution:** Please refer to the printed manual for detailed information.

**Application:** Functional ELISA

**Synonyms:** Discoidin domain-containing receptor 2; Discoidin domain receptor 2; CD167 antigen-like family member B; Neurotrophic tyrosine kinase; receptor-related 3; Receptor protein-tyrosine kinase TKT; Tyrosine-protein kinase TYRO10; CD167b; Ddr2;Ntrkr3;tyro10

## Immunogen Information:

**Sequence:** Met 1-Arg 399

## 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) 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.