



# Recombinant Protein Technical Manual

## Recombinant Human DDR2 Kinase/CD167b Protein (Fc Tag)(Active) RPES0310

### Product Data:

**Product SKU:** RPES0310

**Size:** 50µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_001014796.1

### Protein Information:

**Molecular Mass:** 69.4 kDa

**AP Molecular Mass:** 87 kDa

**Tag:** C-Fc

**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.

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

**Endotoxin:** < 1.0 EU per µg 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:** CD167;MIG20a;NTRKR3;TKT;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.