

DDR1 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	HGK2;PTK3A;PTK3;EDDR1;CD167;TRKE;NEP;RTK6;NTRK4;CAK;DDR;MCK10
Protein Construction:	Asp21-Ala417
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q08345-1
Molecular Weight:	46.93 kDa (predicted); 60-75 kDa (reducing condition)

QC Testing

Biological Activity:	Immobilized Biotinylated Human DDR1, His Avi Tag at 0.5 µg/ml (100 µl/well) on the streptavidin precoated plate (5 µg/ml). Dose response curve for Anti-DDR1 Antibody, hFc Tag with the EC50 of 7.0 ng/ml determined by ELISA. (QC Test)
Purity:	> 95% as determined by Bis-Tris PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from 0.22 µm filtered solution in PBS (pH 7.4). Normally 8% trehalose is added as protectant before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Discoidin domain receptor family, member 1 (DDR1), also known as or CD167a (cluster of differentiation 167a), and Mammary carcinoma kinase 10 (MCK10), belongs to a subfamily of tyrosine kinase receptors with an extracellular domain homologous to Dictyostellium discoideum protein discoidin 1. Receptor tyrosine kinases play a key role in the communication of cells with their microenvironment. These kinases are involved in the regulation

of cell growth, differentiation and metabolism. Expression of DDR1/MCK10/CD167 is restricted to epithelial cells, particularly in the kidney, lung, gastrointestinal tract, and brain. In addition, it has been shown to be significantly overexpressed in several human tumors. DDR1/MCK10/CD167 plays an important role in regulating attachment to collagen, chemotaxis, proliferation, and MMP production in smooth muscle cells. DDR1 functions in a feedforward loop to increase p53 levels and at least some of its effectors. Inhibition of DDR1 function resulted in strikingly increased apoptosis of wild-type p53-containing cells in response to genotoxic stress through a caspase-dependent pathway.

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