

## DDR1 Protein, Human (sf9, His-GST)

Cat. No.:	HY-P75304
Synonyms:	Epithelial discoidin domain-containing receptor 1; HGK2; CD167a; CAK; EDDR1
Species:	Human
Source:	Sf9 insect cells
Accession:	Q08345 (R444-V913)
Gene ID:	780
Molecular Weight:	Approximately 80 kDa

### PROPERTIES

Biological Activity	The enzyme activity of this recombinant protein is testing in progress, we cannot offer a guarantee yet.
Appearance	Solution.
Formulation	Supplied as a 0.2 µm filtered solution of 20 mM Tris, 500 mM NaCl, pH 7.4, 10% glycerol, 3 mM DTT.
Endotoxin Level	<1 EU/µg, determined by LAL method.
Reconstitution	N/A.
Storage & Stability	Stored at -80°C for 1 year. It is stable at -20°C for 3 months after opening. It is recommended to freeze aliquots at -80°C for extended storage. Avoid repeated freeze-thaw cycles.
Shipping	Shipping with dry ice.

### DESCRIPTION

#### Background

DDR1 protein serves as a tyrosine kinase and functions as a cell surface receptor for fibrillar collagen, playing a pivotal role in regulating cell attachment to the extracellular matrix and influencing processes such as extracellular matrix remodeling, cell migration, differentiation, survival, and proliferation. Upon collagen binding, DDR1 initiates a signaling cascade involving SRC and activates MAP kinases. This activation, in turn, leads to the up-regulation of matrix metalloproteinases MMP2, MMP7, and MMP9, facilitating extracellular matrix remodeling and promoting cell migration and wound healing. DDR1's significance extends to various physiological processes, including normal blastocyst implantation during pregnancy, mammary gland differentiation, lactation, and the maintenance of ear morphology and hearing. Additionally, DDR1 contributes to arterial wound healing by promoting smooth muscle cell migration and plays a role in tumor cell invasion, further underscoring its diverse functional repertoire. Notably, DDR1 phosphorylates PTPN11 as part of its regulatory activities.

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**Caution: Product has not been fully validated for medical applications. For research use only.**

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