DDR1 Protein, Rat (HEK293, His)

Cat. No.:	HY-P75299
Synonyms:	Epithelial discoidin domain-containing receptor 1; HGK2; CD167a; CAK; EDDR1
Species:	Rat
Source:	HEK293
Accession:	Q6MG19 (D22-T413)
Gene ID:	25678
Molecular Weight:	Approximately 50-58 kDa due to the glycosylation.

PROPERTIES

AA Sequence	D M K G H F D P A K C R Y A L G M Q D R T I P D S D I S V S S S W S D S T A A R H S R L E S S D G D G A W C P A G P V F P K E E E Y L Q V D L R R L H L V A L V G T Q G R H A G G L G K E F S R S Y R L R Y S R D G R R W M D W K D R W G Q E V I S G N E D P G G V V L K D L G P P M V A R L V R F Y P R A D R V M S V C L R V E L Y G C L W R D G L L S Y T A P V G Q T M Q L S E M V Y L N D S T Y D G Y T A G G L Q Y G G L G Q L A D G V V G L D D F R Q S Q E L R V W P G Y D Y V G W S N H S F P S G Y V E M E F E F D R L R S F Q T M Q V H C N N M H T L G A R L P G G V E C R F K R G P A M A W E G E P V R H A L G G S L G D P R A R A I S V P L G G H V G R F L Q C R F L F A G P W L L F S E I S F I S D V V N D S S D T F P P A P W W P P G P P P T N F S S L E L E P R G Q Q P V A K A E G S P T
Biological Activity	Measured by its binding ability in a functional ELISA. Immobilized Collagen I at 10 μg/mL can bind Rat DDR1 with KD is 6.273 nM.
Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.2 μm filtered solution of PBS, pH 7.4.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O. For long term storage it is recommended to add a carrier protein (0.1% BSA, 5% HSA, 10% FBS or 5% Trehalose).
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	DDR1 protein, a tyrosine kinase functioning as a cell surface receptor for fibrillar collagen, orchestrates diverse cellular processes critical for tissue homeostasis. It regulates cell attachment to the extracellular matrix, influencing matrix remodeling, cell migration, differentiation, survival, and proliferation. Upon collagen binding, DDR1 initiates a signaling cascade involving SRC and leading to MAP kinase activation. This intricate network contributes to extracellular matrix remodeling through the up-regulation of matrix metalloproteinases MMP2, MMP7, and MMP9, facilitating cell migration and wound healing, as well as promoting tumor cell invasion. DDR1's impact extends to arterial wound healing by promoting smooth muscle cell migration. Furthermore, it phosphorylates PTPN11 and is indispensable for normal blastocyst implantation during pregnancy, mammary gland differentiation, lactation, and maintenance of normal ear morphology and hearing. The multifunctional role of DDR1 underscores its significance in governing diverse physiological processes.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com
Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA