Epithelial Discoidin Domain-Containing Receptor 1 (DDR1) Rat Recombinant Protein

PRODUCT OVERVIEW

Product Name	Epithelial discoidin domain-containing receptor 1 (Ddr1), Recombinant Protein
Full Product Name	Recombinant Rat Epithelial discoidin domain-containing receptor 1 (Ddr1), partial
Product Gene Name	Ddr1 recombinant protein
Product Synonym Gene Name	Ddr1
Sequence	DMKGHFDPA KCRYALGMQD RTIPDSDISV SSSWSDSTAA RHSRLESSDG DGAWCPAGPV FPKEEEYLQV DLRRLHLVAL VGTQGRHAGG LGKEFSRSYR LRYSRDGRRW MDWKDRWGQE VISGNEDPGG VVLKDLGPPM VARLVRFYPR ADRVMSVCLR VELYGCLWRD GLLSYTAPVG QTMQLSEMVY LNDSTYDGYT AGGLQYGGLG QLADGVVGLD DFRQSQELRV WPGYDYVGWS NHSFPSGYVE MEFEFDRLRS FQTMQVHCNN MHTLGARLPG GVECRFKRGP AMAWEGEPVH HALGGSLGDP RARAISVPLG GHVGRFLQCR FLFAGPWLLF SEISFISDVV NDSSDTFPPA PWWPPGPPPT NFSSLELEPR GQQPVAKAEG SPTA
Host	E Coli or Yeast or Baculovirus or Mammalian Cell
Form/Format	Lyophilized or liquid (Format to be determined during the manufacturing process)
Purity/Purification	Greater or equal to 85% purity as determined by SDS-PAGE. (lot specific)
Preparation and Storage	Store at -20 degrees C. For long-term storage, store at -20 degrees C or -80 degrees C. Store working aliquots at 4 degrees C for up to one week. Repeated freezing and thawing is not recommended.
Molecular Weight	101,165 Da
Sequence Positions	22-414
Tag Information	This protein contains an N-terminal tag and may also contain a C-terminal tag. Tag types are determined by various factors including tag-protein stability, please inquire for tag information.
Sterility	Sterile filter available upon request.
Endotoxin	Low endotoxin available upon request.
3D Structure	ModBase 3D Structure for Q63474
Species	Rat
ISO Certification	Manufactured in an ISO 9001:2015 Certified Laboratory.
Related Product Information for Ddr1 recombinant protein	Receptor tyrosine kinases (RTKs) play a key role in the communication of cells with their microenvironment. These molecules are involved in the regulation of cell growth, differentiation and metabolism. This protein is a RTK that is widely expressed in normal and transformed epithelial cells and is activated by various types of collagen. This protein belongs to a subfamily of tyrosine kinase receptors with a homology region to the Dictyostelium discoideum protein discoidin I in their extracellular domain. Its autophosphorylation is achieved by all collagens so far tested (type I to type VI). In situ studies and Northern-blot analysis showed that expression of this encoded protein is restricted to epithelial cells, particularly in the kidney, lung, gastrointestinal tract, and brain. In addition, this protein is significantly over-expressed in several human tumors from breast, ovarian, esophageal, and pediatric brain. This gene is located on chromosome 6p21.3 in proximity to several HLA class I genes. Alternative splicing of this gene results in multiple transcript variants.
Other Notes	Small volumes of Ddr1 recombinant protein vial(s) may occasionally become entrapped in the seal of the product vial during shipment and storage. If necessary, briefly centrifuge the vial on a tabletop centrifuge to dislodge any liquid in the container`s cap. Certain products may require to ship with dry ice and additional dry ice fee may apply.
Searchable Terms for Ddr1 purchase	MBS1357364 is a recombinant protein targeting Ddr1. Also known as Recombinant Rat Epithelial discoidin domain-containing receptor 1 (Ddr1), partial. Host: E Coli or Yeast or Baculovirus or Mammalian Cell.

ADDITIONAL DETAILS

NCBI/Uniprot data below describe general gene information for Ddr1. It may not necessarily be applicable to this product.

NCBI GI #	2497563
NCBI GeneID	25678
NCBI Accession #	Q63474.1
UniProt Primary Accession #	Q63474
UniProt Related Accession #	Q63474
NCBI Official Full Name	Epithelial discoidin domain-containing receptor 1
NCBI Official Synonym Full Names	discoidin domain receptor tyrosine kinase 1
NCBI Official Symbol	Ddr1
NCBI Official Synonym Symbols	Cak; Drd1; PTK3D
UniProt Protein Name	Epithelial discoidin domain-containing receptor 1
UniProt Synonym Protein Names	CD167 antigen-like family member A; Cell adhesion kinase; Discoidin receptor tyrosine kinase; Protein-tyrosine kinase 3; Tyrosine kinase DDR; Tyrosine-protein kinase CAK; CD_antigen: CD167a
Protein Family	Epithelial discoidin domain-containing receptor
UniProt Gene Name	Ddr1
UniProt Synonym Gene Names	Eddr1; Ptk3; Epithelial discoidin domain receptor 1
NCBI Protein Information	epithelial discoidin domain-containing receptor 1
NCBI Summary for Ddr1	protein tyrosine kinase that may play a role in nervous system development [RGD, Feb 2006]
UniProt Comments for Ddr1	Tyrosine kinase that functions as cell surface receptor for fibrillar collagen and regulates cell attachment to the extracellular matrix, remodeling of the extracellular matrix, cell migration, differentiation, survival and cell proliferation. Collagen binding triggers a signaling pathway that involves SRC and leads to the activation of MAP kinases. Regulates remodeling of the extracellular matrix by up-regulation of the matrix metalloproteinases MMP2, MMP7 and MMP9, and thereby facilitates cell migration and wound healing. Promotes smooth muscle cell migration, and thereby contributes to arterial wound healing. Also plays a role in tumor cell invasion. Phosphorylates PTPN11. Required for normal blastocyst implantation during pregnancy, for normal mammary gland differentiation and normal lactation. Required for normal ear morphology and normal hearing ().
Research Articles on Ddr1	**1.** DDR1 clustering, activation, and interaction with NMIIA filaments enhance the collagen tractional remodeling.
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