

DDR1 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1198a

Specification

DDR1 Antibody - Product Information

Application	WB
Primary Accession	Q08345
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Isotype	IgG1

Description

DDR1: discoidin domain receptor tyrosine kinase 1. 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. The protein encoded by this gene 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.

Immunogen

Purified recombinant fragment of DDR1 (aa602-681) expressed in E. Coli.

Formulation

Ascitic fluid containing 0.03% sodium azide.

DDR1 Antibody - Additional Information

Gene ID 780

Other Names

Epithelial discoidin domain-containing receptor 1, Epithelial discoidin domain receptor 1, 2.7.10.1, CD167 antigen-like family member A, Cell adhesion kinase, Discoidin receptor tyrosine kinase, HGK2, Mammary carcinoma kinase 10, MCK-10, Protein-tyrosine kinase 3A, Protein-tyrosine kinase RTK-6, TRK E, Tyrosine kinase DDR, Tyrosine-protein kinase CAK, CD167a, DDR1, CAK, EDDR1, NEP, NTRK4, PTK3A, RTK6, TRKE

Dilution

WB~~1/500 - 1/2000

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

DDR1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

DDR1 Antibody - Protein Information

Name DDR1

Synonyms CAK, EDDR1, NEP, NTRK4, PTK3A, RTK6, TRK

Function

Tyrosine kinase that functions as a 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. Required for normal blastocyst implantation during pregnancy, for normal mammary gland differentiation and normal lactation. Required for normal ear morphology and normal hearing (By similarity). Promotes smooth muscle cell migration, and thereby contributes to arterial wound healing. Also plays a role in tumor cell invasion. Phosphorylates PTPN11.

Cellular Location

[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 3]: Secreted.

Tissue Location

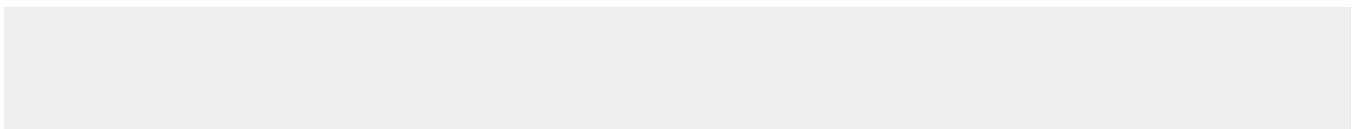
Detected in T-47D, MDA-MB-175 and HBL-100 breast carcinoma cells, A-431 epidermoid carcinoma cells, SW48 and SNU-C2B colon carcinoma cells and Hs 294T melanoma cells (at protein level) Expressed at low levels in most adult tissues and is highest in the brain, lung, placenta and kidney. Lower levels of expression are detected in melanocytes, heart, liver, skeletal muscle and pancreas Abundant in breast carcinoma cell lines. In the colonic mucosa, expressed in epithelia but not in the connective tissue of the lamina propria. In the thyroid gland, expressed in the epithelium of the thyroid follicles. In pancreas, expressed in the islets of Langerhans cells, but not in the surrounding epithelial cells of the exocrine pancreas. In kidney, expressed in the epithelia of the distal tubules Not expressed in connective tissue, endothelial cells, adipose tissue, muscle cells or cells of hematopoietic origin

DDR1 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

DDR1 Antibody - Images



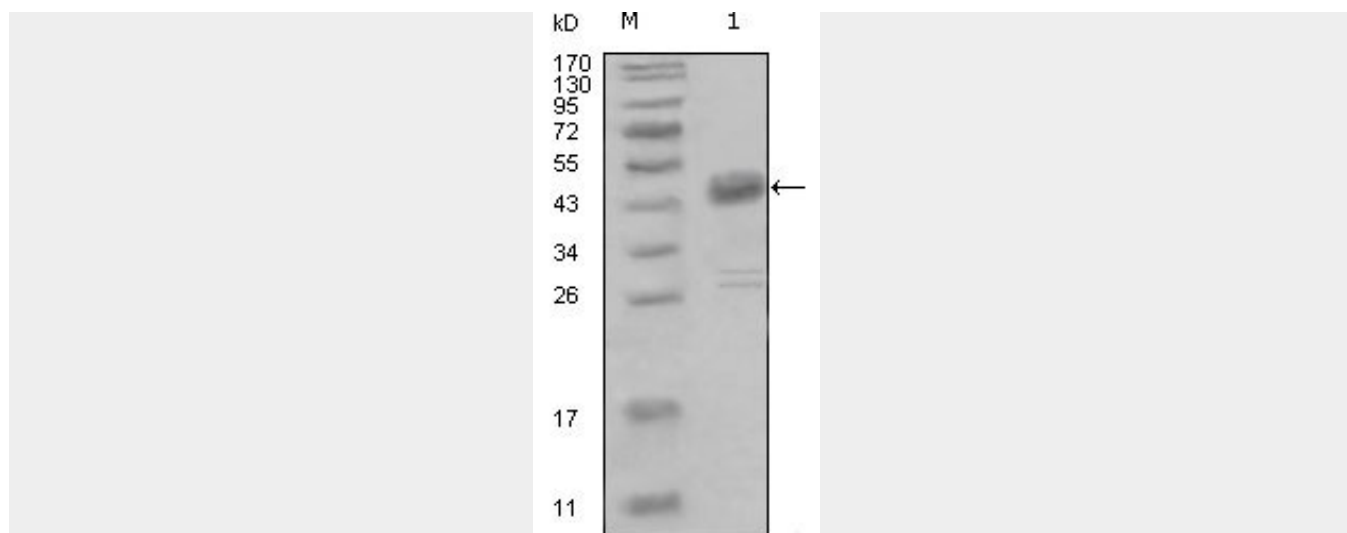


Figure 1: Western blot analysis using DDR1 mouse mAb against truncated MBP-DDR1 recombinant protein (1).

DDR1 Antibody - References

1. FASEB J. 2000 May;14(7):973-81.
2. Exp Eye Res. 2001 Jan;72(1):87-92.
3. Proc Natl Acad Sci U S A. 2002 Dec 24;99(26):16899-903.