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DDR1 Antibody

Purified Mouse Monoclonal Antibody (Mab)
Catalog # AM8458b

Product Information

Application	WB, IHC-P, E
Primary Accession	Q08345
Reactivity	Human
Host	Mouse
Clonality	monoclonal
Isotype	IgG2b,k
Clone Names	1464CT339.1.54
Calculated MW	101128

Additional Information

Gene ID	780
Other Names	Epithelial discoidin domain-containing receptor 1, Epithelial discoidin domain receptor 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
Target/Specificity	This DDR1 antibody is generated from a mouse immunized with a recombinant protein.
Dilution	WB~~1:1000 IHC-P~~1:100~500 E~~Use at an assay dependent concentration.
Format	Purified monoclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein G column, followed by dialysis against PBS.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. 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.

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

Background

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. 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.

References

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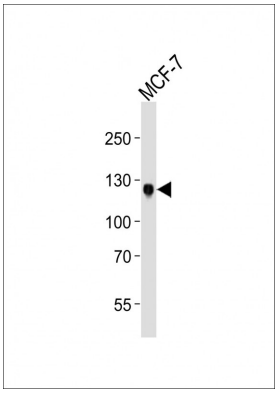
Johnson J.D.,et al.Proc. Natl. Acad. Sci. U.S.A. 90:5677-5681(1993).
Laval S.,et al.Cell Growth Differ. 5:1173-1183(1994).
Perez J.L.,et al.Oncogene 9:211-219(1994).
Sakuma S.,et al.FEBS Lett. 398:165-169(1996).

Images

AM8458b staining DDR1 in human brain sections by Immunohistochemistry (IHC-P - paraformaldehyde-fixed, paraffin-embedded sections). Tissue was fixed with formaldehyde and blocked with 3% BSA for 0. 5 hour at room temperature; antigen retrieval was by heat mediation with a citrate buffer (pH6). Samples were

incubated with primary antibody (1/25) for 1 hours at 37°C. A undiluted biotinylated goat polyvalent antibody was used as the secondary antibody.



Western blot analysis of lysate from MCF-7 cell line, using DDR1 Antibody(Cat. #AM8458b). AM8458b was diluted at 1:1000. A goat anti-mouse IgG H&L(HRP) at 1:10000 dilution was used as the secondary antibody. Lysate at 20µg.