

DDR2 Antibody

Purified Mouse Monoclonal Antibody

Catalog # AO1124a

Product Information

Application	WB, IHC, ICC, E
Primary Accession	Q16832
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	3B11E4
Isotype	IgG2a
Calculated MW	96736
Description	DDR2 (discoidin domain receptor family, member 2) is one of the largest families of proteins in eukaryotes. The family has been classified in 8 major groups based on sequence comparison of their tyrosine (PTK) or serine/threonine (STK) kinase catalytic domains. 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. In several cases the biochemical mechanism by which RTKs transduce signals across the membrane has been shown to be ligand induced receptor oligomerization and subsequent intracellular phosphorylation. This autophosphorylation leads to phosphorylation of cytosolic targets as well as association with other molecules, which are involved in pleiotropic effects of signal transduction. RTKs have a tripartite structure with extracellular, transmembrane, and cytoplasmic regions. This gene encodes a member of a novel subclass of RTKs and contains a distinct extracellular region encompassing a factor VIII-like domain. Alternative splicing in the 5' UTR results in multiple transcript variants encoding the same protein.
Immunogen	Purified recombinant fragment of human DDR2 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	4921
Other Names	Discoidin domain-containing receptor 2, Discoidin domain receptor 2, 2.7.10.1, CD167 antigen-like family member B, Discoidin domain-containing receptor tyrosine kinase 2, Neurotrophic tyrosine kinase, receptor-related 3, Receptor protein-tyrosine kinase TKT, Tyrosine-protein kinase TYRO10, CD167b, DDR2, NTRKR3, TKT, TYRO10
Dilution	WB~~1/500 - 1/2000 IHC~~1/200 - 1/1000 ICC~~N/A E~~N/A
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

DDR2 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	DDR2
Synonyms	NTRKR3, TKT, TYRO10
Function	Tyrosine kinase involved in the regulation of tissues remodeling (PubMed: 30449416). It functions as a cell surface receptor for fibrillar collagen and regulates cell differentiation, remodeling of the extracellular matrix, cell migration and cell proliferation. Required for normal bone development. Regulates osteoblast differentiation and chondrocyte maturation via a signaling pathway that involves MAP kinases and leads to the activation of the transcription factor RUNX2. Regulates remodeling of the extracellular matrix by up- regulation of the collagenases MMP1, MMP2 and MMP13, and thereby facilitates cell migration and tumor cell invasion. Promotes fibroblast migration and proliferation, and thereby contributes to cutaneous wound healing.
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Detected in osteocytes, osteoblastic cells in subchondral bone, bone lining cells, tibia and cartilage (at protein level). Detected at high levels in heart and lung, and at low levels in brain, placenta, liver, skeletal muscle, pancreas, and kidney

References

1. Leiting B. Kwan AP. Matrix Biol. 2006, Aug, 25(6):355-64. Epub 2006 May 26. 2. Shyu KG. Chao YM. Wang BW. et al. Hypertension. 2005, Sep, 46(3):614-21. Epub 2005 Aug 8. 3. Neale JC. Kenny TP. Gershwin ME. Clin Dev Immunol. 2004, Jun, 11(2):157-63.

Images



Figure 1: Western blot analysis using DDR2 mouse mAb against truncated DDR2 recombinant protein.

Figure 2: Immunohistochemical analysis of paraffin-embedded human skeletal muscle tissues using DDR2 mouse mAb.

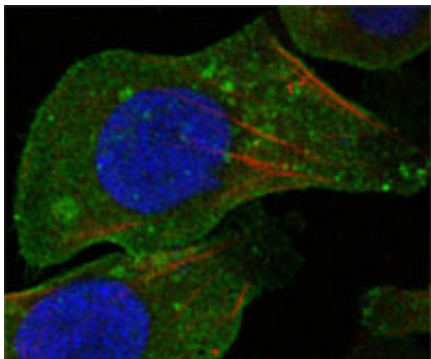
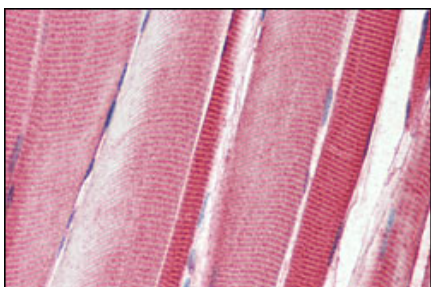


Figure 3: Confocal immunofluorescence analysis of A549 cells using DDR2 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.