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DDR2 Antibody
Purified Mouse Monoclonal Antibody
Catalog # AO1124a

Specification

DDR2 Antibody - Product Information

Application	**WB, IHC, ICC, E**
Primary Accession	Q16832
Reactivity	**Human**
Host	**Mouse**
Clonality	**Monoclonal**
Isotype	**IgG2a**

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.

DDR2 Antibody - 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.

DDR2 Antibody - 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

DDR2 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 Cytomety
- Cell Culture

DDR2 Antibody - Images

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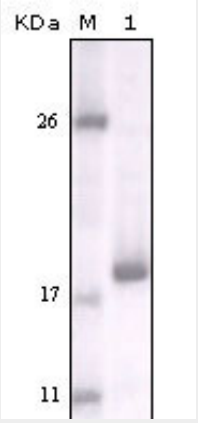

Figure 1: Western blot analysis using DDR2 mouse mAb against truncated DDR2 recombinant protein.

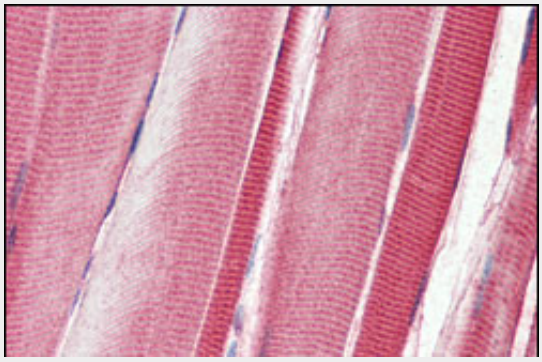

Figure 2: Immunohistochemical analysis of paraffin-embedded human skeletal musle tissues using DDR2 mouse mAb.

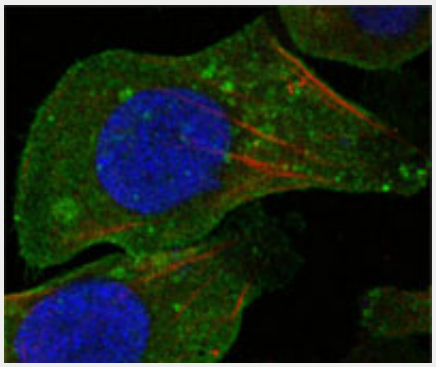

Figure 3: Confocal immunofluorescence analysis of A549 cells using DDR2 mouse mAb (green). Red: Actin filaments have been labeled with DY-554 phalloidin. Blue: DRAQ5 fluorescent DNA dye.

DDR2 Antibody - References

1. Leitinger 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.