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ROR1 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1308a

Product Information

Application	WB, ICC, E
Primary Accession	Q01973
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	2H6
Isotype	IgG1
Calculated MW	104283
Description	ROR1, a type I membrane protein, is a receptor protein tyrosine kinase that modulates neurite growth in the central nervous system. The ROR-family receptor tyrosine kinases consist of two structurally related proteins, ROR1 and ROR2. These proteins are characterized by having intracellular tyrosine kinase domains, which are highly related to Trk-family kinases, extracellular Frizzled-like cysteine-rich domains (CRDs) and Kringle domains. The ROR family members are highly conserved among species, such as C. elegans, Drosophila, Xenopus and mammals. ROR1 and ROR2 are both involved in organogenesis with particular emphasis in neuronal differentiation. Increased expression of ROR1 in acute lymphoblastic leukemias (ALLs) as well as chronic lymphocytic leukemias (CLLs) implicate this protein as a potential tool for targeted immunotherapy in these diseases.
Immunogen	Recombinant extracellular fragment of human ROR1 (aa30-406) fused with hIgGFc tag, expressed in HEK293 cells
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	4919
Other Names	Tyrosine-protein kinase transmembrane receptor ROR1, 2.7.10.1, Neurotrophic tyrosine kinase, receptor-related 1, ROR1, NTRKR1
Dilution	WB~~1/500 - 1/2000 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	ROR1 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	ROR1
Synonyms	NTRKR1
Function	Has very low kinase activity in vitro and is unlikely to function as a tyrosine kinase in vivo (PubMed:25029443). Receptor for ligand WNT5A which activate downstream NFkB signaling pathway and may result in the inhibition of WNT3A-mediated signaling (PubMed:25029443, PubMed:27162350). In inner ear, crucial for spiral ganglion neurons to innervate auditory hair cells (PubMed:27162350). Via IGFBP5 ligand, forms a complex with ERBB2 to enhance CREB oncogenic signaling (PubMed:36949068).
Cellular Location	Membrane; Single- pass type I membrane protein. Cell projection, axon {ECO:0000250|UniProtKB:Q9Z139}
Tissue Location	Expressed strongly in human heart, lung and kidney, but weakly in the CNS. Isoform Short is strongly expressed in fetal and adult CNS and in a variety of human cancers, including those originating from CNS or PNS neuroectoderm

References

1. J Cell Sci. 2005 Jan 15;118(Pt 2):433-46. 2. Oncogene. 1996 Oct 3;13(7):1555-9.

Images

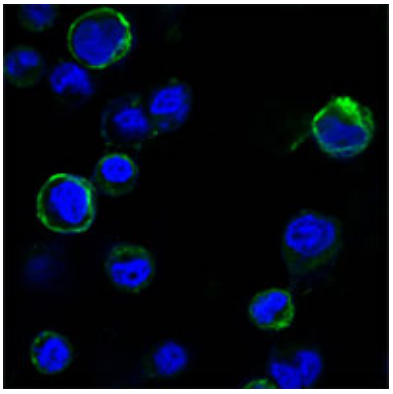

Figure 1: Confocal immunofluorescence analysis of HEK293 cells trasfected with extracellular ROR1 (aa30-406)-hIgGFc using ROR1 mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye.

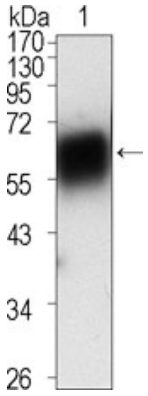

Figure 2: Western blot analysis using ROR1 mouse mAb against extracellular domain of human ROR1 (aa30-423).