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TYRO3 Antibody

Purified Mouse Monoclonal Antibody
Catalog # AO1108a

Product Information

Application	WB, ICC, E
Primary Accession	Q06418
Reactivity	Human
Host	Mouse
Clonality	Monoclonal
Clone Names	1C10E8
Isotype	IgG1
Calculated MW	96905
Description	Tyrosine-protein kinase (TYRO3) belongs to the Tyr protein kinase family (AXL/UFO subfamily). The UFO family of receptor tyrosine kinases is comprised of subfamily members Rse(also referred to as Tyro3 or Sky) and UFO (also called Tyro7 or Axl). Two distinct isoforms of Rse, designated Brt and Etk-2, have been described. Brt differs from Rse at its C-terminus, but more importantly lacks the N-terminal 31 amino acid signal peptide sequence present in Rse, which is replaced by a 27 amino acid Brt-specific sequence. It has been suggested that as a result of this alternative splicing event, Brt resides in the cytoplasm, unlike Rse which is expressed on the cell surface. Ekt-2 also lacks an N-terminal signal peptide which is substituted with a 45 amino acid Ekt-2-specific sequence. Protein kinases mediate most of the signal transduction in eukaryotic cells, regulating cellular metabolism, transcription, cell cycle progression, cytoskeletal rearrangement and cell movement, apoptosis, and differentiation.
Immunogen	Purified recombinant fragment of TYRO3 expressed in E. Coli.
Formulation	Ascitic fluid containing 0.03% sodium azide.

Additional Information

Gene ID	7301
Other Names	Tyrosine-protein kinase receptor TYRO3, 2.7.10.1, Tyrosine-protein kinase BYK, Tyrosine-protein kinase DTK, Tyrosine-protein kinase RSE, Tyrosine-protein kinase SKY, Tyrosine-protein kinase TIF, TYRO3, BYK, DTK, RSE, SKY, TIF
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	TYRO3 Antibody is for research use only and not for use in diagnostic or

therapeutic procedures.

Protein Information

Name	TYRO3
Synonyms	BYK, DTK, RSE, SKY, TIF
Function	Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding to several ligands including TULP1 or GAS6. Regulates many physiological processes including cell survival, migration and differentiation. Ligand binding at the cell surface induces dimerization and autophosphorylation of TYRO3 on its intracellular domain that provides docking sites for downstream signaling molecules. Following activation by ligand, interacts with PIK3R1 and thereby enhances PI3-kinase activity. Activates the AKT survival pathway, including nuclear translocation of NF-kappa-B and up-regulation of transcription of NF-kappa-B-regulated genes. TYRO3 signaling plays a role in various processes such as neuron protection from excitotoxic injury, platelet aggregation and cytoskeleton reorganization. Also plays an important role in inhibition of Toll-like receptors (TLRs)-mediated innate immune response by activating STAT1, which selectively induces production of suppressors of cytokine signaling SOCS1 and SOCS3.
Cellular Location	Cell membrane; Single-pass type I membrane protein
Tissue Location	Abundant in the brain and lower levels in other tissues

References

1. Janssen, J.W.G., et al. 1991. Oncogene 6: 2113-2120. 2. Schlessinger, J., et al. 1992. Neuron 9: 383-391. 3. Biesecker, L.G., et al. 1995. Oncogene 10: 2239-2242.

Images

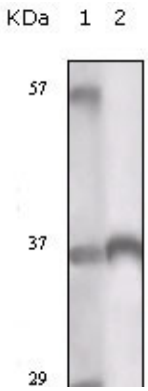

Figure 1: Western blot analysis using TYRO3 mouse mAb against truncated TYRO3 recombinant protein.

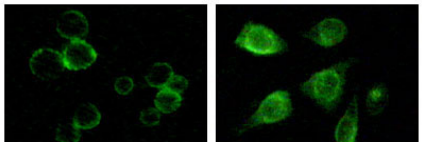

Figure 2: Immunofluorescence staining of methanol-fixed MCF-7 and HepG2 cells showing membrane and cytoplasmic localization.

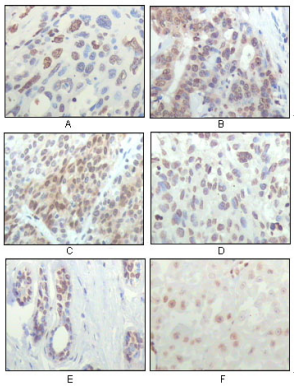

Figure 2: Immunohistochemical analysis of paraffin-embedded human esophageal squamous cell carcinoma (A), colon adenocarcinoma (B), liver carcinoma (C), skin carcinoma (D), breast ductal tumor (E) and brain tumor (F), showing nuclear localization using RSK1 mouse mAb with DAB staining.