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MERTK Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP7865a

Product Information

Application	IHC-P, FC, IF, WB, E
Primary Accession	Q12866
Reactivity	Human, Rat, Mouse
Predicted	Canine, Rabbit
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	110249

Additional Information

Gene ID	10461
Other Names	Tyrosine-protein kinase Mer, Proto-oncogene c-Mer, Receptor tyrosine kinase MerTK, MERTK, MER
Target/Specificity	This MERTK antibody is generated from rabbits immunized with a his tag recombinant protein of human MERTK.
Dilution	IHC-P~~1:100~500 FC~~1:10~50 IF~~1:10~50 WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is prepared by Saturated Ammonium Sulfate (SAS) precipitation 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	MERTK Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	MERTK
Synonyms	MER
Function	Receptor tyrosine kinase that transduces signals from the extracellular matrix into the cytoplasm by binding to several ligands including LGALS3, TUB, TULP1 or GAS6. Regulates many physiological processes including cell

	survival, migration, differentiation, and phagocytosis of apoptotic cells (efferocytosis). Ligand binding at the cell surface induces autophosphorylation of MERTK on its intracellular domain that provides docking sites for downstream signaling molecules. Following activation by ligand, interacts with GRB2 or PLCG2 and induces phosphorylation of MAPK1, MAPK2, FAK/PTK2 or RAC1. MERTK signaling plays a role in various processes such as macrophage clearance of apoptotic cells, platelet aggregation, cytoskeleton reorganization and engulfment (PubMed:32640697). Functions in the retinal pigment epithelium (RPE) as a regulator of rod outer segments fragments phagocytosis. 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	Not expressed in normal B- and T-lymphocytes but is expressed in numerous neoplastic B- and T-cell lines. Highly expressed in testis, ovary, prostate, lung, and kidney, with lower expression in spleen, small intestine, colon, and liver

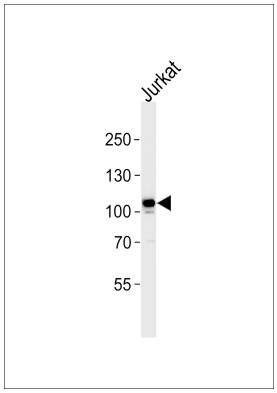
Background

MERTK is a member of the MER/AXL/TYRO3 receptor kinase family and a transmembrane protein with two fibronectin type-III domains, two Ig-like C2-type (immunoglobulin-like) domains, and one tyrosine kinase domain. Mutations in MERTK gene have been associated with disruption of the retinal pigment epithelium (RPE) phagocytosis pathway and onset of autosomal recessive retinitis pigmentosa (RP).

References

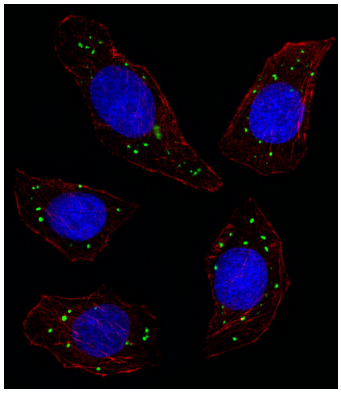
Gal A., Li Y., Thompson D.A., Weir J., Orth U., Jacobson S.G.Nat. Genet. 26:270-271(2000)
Hillier L.W., Graves T.A., Fulton R.S., Fulton L.A., Pepin K.H., Minx P., Wagner-McPherson C., Layman D., Wylie K., Sekhon M., Becker M.C., Fewell G.A., Delehaunty K.D., Miner T.L., Nash W.E., Kremitzki C., Oddy L.,Nature 434:724-731(2005)

Images

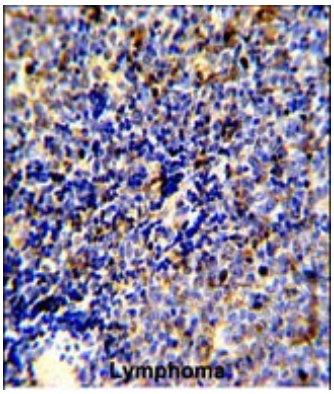


MER Antibody (Cat. #AP7865a) western blot analysis in Jurkat cell line lysates (35ug/lane).This demonstrates the MER antibody detected the MER protein (arrow).

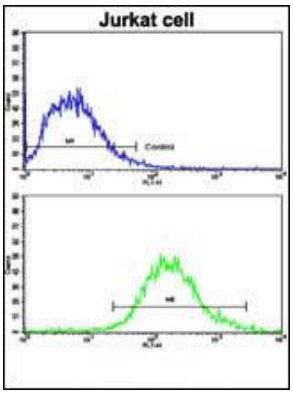
Fluorescent image of U251 cell stained with MERTK Antibody(Cat#AP7865a/SH090316F).U251 cells were fixed with 4% PFA (20 min), permeabilized with Triton X-100 (0.1%, 10 min), then incubated with MERTK primary antibody (1:25, 1 h at 37℃). For secondary antibody, Alexa Fluor® 488 conjugated donkey anti-rabbit antibody (green) was used (1:400, 50 min at 37℃).Cytoplasmic



actin was counterstained with Alexa Fluor® 555 (red) conjugated Phalloidin (7units/ml, 1 h at 37°C). Nuclei were counterstained with DAPI (blue) (10 µg/ml, 10 min).MERTK immunoreactivity is localized to Vesicles significantly.



Formalin-fixed and paraffin-embedded human lymphoma reacted with MERTK Antibody, which was peroxidase-conjugated to the secondary antibody, followed by DAB staining. This data demonstrates the use of this antibody for immunohistochemistry; clinical relevance has not been evaluated.



Flow cytometric analysis of jurkat cells using MERTK Antibody(bottom histogram) compared to a negative control cell (top histogram). FITC-conjugated goat-anti-rabbit secondary antibodies were used for the analysis.

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