abcam

ab307522

Alexa Fluor® 647 Anti-MERTK antibody [EPR26359-12]

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Conjugation	Alexa Fluor® 647
Excitation/Emission	Ex: 650nm, Em: 665nm
Storage buffer	pH: 7.4 Preservative: 0.02% Sodium azide Constituents: PBS, 30% Glycerol (glycerin, glycerine), 1% BSA
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Clone number	EPR26359-12
Purification technique	Affinity purification Protein A
Concentration	0.5 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

Flow Cyt

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Species	Human
Dilution info	1/50
Notes	-

Expected

Species	Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

ICC/IF

Tested

Species	Mouse
Dilution info	1/50
Notes	-

Not recommended

Species	Human, Rat
Dilution info	-
Notes	-

IHC-P

Expected

Species	Mouse
Dilution info	Use at an assay dependent concentration.
Notes	-

Predicted

Species	Human, Rat
Dilution info	-
Notes	-

Target data

See full target information Mertk

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. 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.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage duration	1-2 weeks
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	-20°C
Aliquoting information	Upon delivery aliquot
Storage information	Avoid freeze / thaw cycle, Store in the dark

Notes

Patented technology
Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

What are the advantages of a recombinant monoclonal antibody?
This product is a recombinant monoclonal antibody, which offers several advantages including:

- High batch-to-batch consistency and reproducibility
- Improved sensitivity and specificity
- Long-term security of supply
- Animal-free batch production

For more information, read more on recombinant antibodies.

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Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The MERTK protein also known as c-Mer tyrosine kinase plays a mechanical role as a receptor tyrosine kinase with a mass of approximately 110 kDa. It is expressed in multiple tissues including the retina immune cells and some epithelial cells. MERTK functions by binding with its ligands facilitating downstream signaling that affects cellular functions. The receptor is part of the TAM family alongside proteins like AXL and TYRO3.
Biological function summary	The receptor MERTK orchestrates processes critical for maintaining cellular homeostasis such as efferocytosis and immune response regulation. It does not operate alone but often interacts with other cellular components to form functional complexes. This protein contributes significantly to phagocytosis a cellular process for clearing apoptotic cells ensuring a controlled immune environment.
Pathways	Several signal transduction pathways involve c-Mer tyrosine kinase in maintaining cellular communication. Notably it participates in the RAS/MAPK and PI3K/AKT pathways which are essential for cell survival and proliferation. These pathways involve interactions with proteins such as GAB1 and SOS highlighting the receptor's integration in cell signaling networks.

Associated diseases and disorders	Aberrant activity of MERTK has associations with cancer and autoimmune disorders. In cancers such as leukemia overexpression of the MERTK protein promotes cell survival and proliferation. Its interaction with other proteins like GRB2 can further exacerbate oncogenic pathways. In autoimmune diseases dysregulated MERTK expression can lead to improper clearance of apoptotic cells contributing to systemic inflammation.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

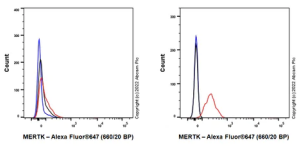
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

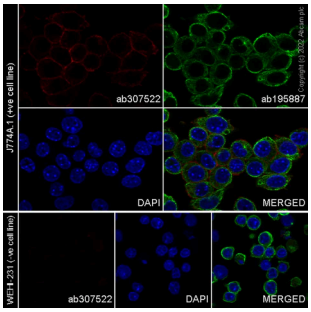
Full details and terms and conditions can be found here:
Terms & Conditions.

3 product images



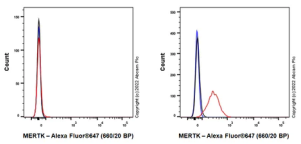
Flow Cytometry - Alexa Fluor® 647 Anti-MERTK antibody [EPR26359-12] (ab307522)

Flow cytometric analysis of HL-60 (human Acute Promyelocytic Leukemia promyeloblast, Left) / HepG2 (human hepatocellular carcinoma epithelial cell, Right) cells labelling MERTK with ab307522 at 1/50 dilution (1ug) (Red) compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Gated on viable cells. Negative control: HL-60 (PMID:23474756).



Immunocytochemistry/ Immunofluorescence - Alexa Fluor® 647 Anti-MERTK antibody [EPR26359-12] (ab307522)

Immunofluorescent analysis of 4% Paraformaldehyde-fixed, 0.1% TritonX-100 permeabilized J774A.1 (mouse reticulum cell sarcoma monocyte/macrophage) cells labelling MERTK with ab307522 at 1/50 (10.0 µg/ml) dilution. Confocal image showing membranous staining in J774A.1 cells. Negative control: WEHI-231(PMID: 16652142; PMID:12884290). Image was taken with a confocal microscope (Leica-Microsystems, TCS SP8). ab195887 Anti-alpha Tubulin mouse monoclonal antibody - Microtubule Marker (Alexa Fluor® 488) was used to counterstain tubulin at 1/200 2.5ug/ml dilution (Red). The Nuclear counterstain was DAPI (Blue).



Flow Cytometry - Alexa Fluor® 647 Anti-MERTK antibody [EPR26359-12] (ab307522)

Flow cytometric analysis of WEHI-231 (mouse B cell lymphoma B lymphocyte, Left) / J774A.1 (mouse reticulum cell sarcoma monocyte macrophage, Right) cells labelling MERTK with ab307522 at 1/50 dilution (1ug) (Red) compared with a Rabbit IgG monoclonal [EPR25A] - Isotype Control (Alexa Fluor® 647) (ab199093) (Black) isotype control and an unlabelled control (cells without incubation with primary antibody and secondary antibody) (Blue). Gated on viable cells. Negative control: WEHI-231(PMID:16652142; PMID:12884290).

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