

PRODUCT INFORMATION



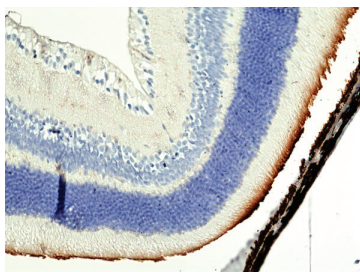
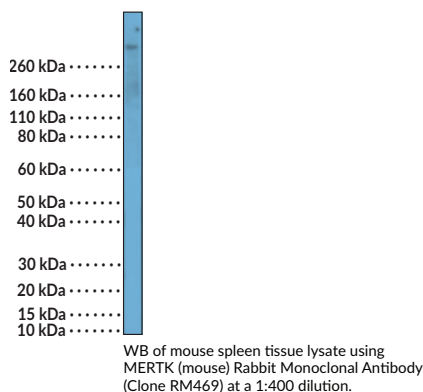
MERTK (mouse) Rabbit Monoclonal Antibody (Clone RM469)

Item No. 42835

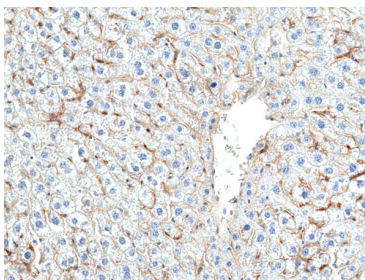
Overview and Properties

Contents:	This vial contains 100 µl of protein A-affinity purified monoclonal antibody.
Synonyms:	MER, c-Mer, Proto-oncogene c-Mer, Receptor Tyrosine Kinase MerTK, RP38, Tyrosine-protein Kinase Mer
Immunogen:	Recombinant MERTK extracellular domain
Cross Reactivity:	(+) MERTK
Species Reactivity:	(+) Mouse
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥1 year
Storage Buffer:	PBS with 50% glycerol, 1% BSA, and 0.09% sodium azide
Clone:	RM469
Host:	Rabbit
Isotype:	IgG
Applications:	Immunohistochemistry (IHC) and Western blot (WB); the recommended starting dilution is 1:100-1:200 for IHC and 1:100-1:500 for WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

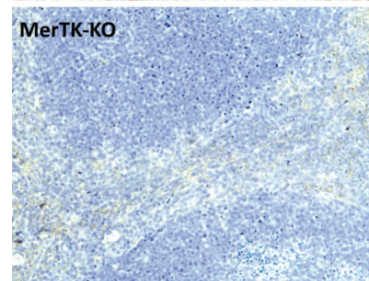
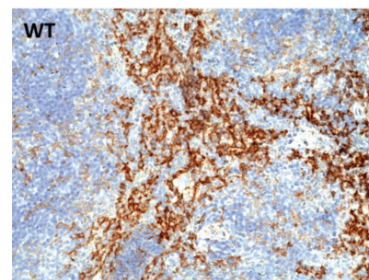
Images



Immunohistochemical staining of formalin-fixed and paraffin-embedded mouse eye tissue using MERTK (mouse) Rabbit Monoclonal Antibody (Clone RM469) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded mouse liver tissue using MERTK (mouse) Rabbit Monoclonal Antibody (Clone RM469) at a dilution of 1:100.



Immunohistochemical staining of formalin-fixed and paraffin-embedded wild-type (WT) or MerTK knock out (MerTK-KO) mouse spleen tissue using MERTK (mouse) Rabbit Monoclonal Antibody (Clone RM469) at a dilution of 1:100.

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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Description

MERTK is a TAM family receptor tyrosine kinase with roles in macrophage activation, apoptotic cell engulfment, and platelet aggregation.^{1,2} It is composed of an extracellular domain, which contains two immunoglobulin-like (Ig-like) domains and two FNIII domains, and an intracellular tyrosine kinase domain.¹ MERTK is expressed at low levels in the brain in oligodendrocytes, astrocytes, and microglia, as well as in the heart and skeletal muscle, and at high levels in the ovary, prostate, testis, lung, retina, and kidney. It is also expressed in platelets, megakaryocytes, dendritic cells, natural killer (NK) cells, monocytes, and macrophages.³ Membrane-bound MERTK can be cleaved by a metalloproteinase to release the extracellular domain as a soluble form of MERTK (sMer), which binds the MERTK activating ligand Gas6 to block Gas6-mediated MERTK activation, leading to defective macrophage-mediated engulfment of apoptotic cells and decreased platelet aggregation.² Mutations in *MERTK* are associated with severe disease in patients with inherited retinal disease.⁴ Cayman's MERTK (mouse) Rabbit Monoclonal Antibody (Clone RM469) can be used for immunohistochemistry (IHC) and Western blot (WB) applications.

References

1. Myers, K.V., Amend, S.R., and Pienta, K.J. Targeting Tyro3, Axl and MerTK (TAM receptors): Implications for macrophages in the tumor microenvironment. *Mol. Cancer* **18**(1), 94 (2019).
2. Sather, S., Kenyon, K.D., Lefkowitz, J.B., et al. A soluble form of the Mer receptor tyrosine kinase inhibits macrophage clearance of apoptotic cells and platelet aggregation. *Blood* **109**(3), 1026-1033 (2007).
3. Tondo, G., Perani, D., and Comi, C. TAM receptor pathways at the crossroads of neuroinflammation and neurodegeneration. *Dis. Markers* 2387614 (2019).
4. Audo, I., Mohand-Said, S., Boulanger-Scemama, E., et al. MERTK mutation update in inherited retinal diseases. *Hum. Mutat.* **39**(7), 887-913 (2018).

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