Datasheet for ABIN1672806

MERTK ELISA Kit

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Overview

Quantity:	96 tests
Target:	MERTK
Binding Specificity:	AA 23-498
Reactivity:	Mouse
Method Type:	Sandwich ELISA
Detection Range:	78-5000 pg/mL
Minimum Detection Limit:	78 pg/mL
Application:	ELISA

Product Details

Purpose:	Sandwich High Sensitivity ELISA kit for Quantitative Detection of Mouse MER/MERTK
Brand:	PicoKine™
Sample Type:	Cell Culture Supernatant, Cell Lysate, Tissue Homogenate, Serum
Analytical Method:	Quantitative
Detection Method:	Colorimetric
Immunogen:	Expression system for standard: sf21 Immunogen sequence: E23-F498
Specificity:	Expression system for standard: sf21 Immunogen sequence: E23-F498
Cross-Reactivity (Details):	There is no detectable cross-reactivity with other relevant proteins.

Product Details

Sensitivity:	<10pg/mL
Material not included:	Microplate reader in standard size. Automated plate washer. Adjustable pipettes and pipette tips. Multichannel pipettes are recommended in the condition of large amount of samples in the detection. Clean tubes and Eppendorf tubes. Washing buffer (neutral PBS or TBS). Preparation of 0.01M TBS: Add 1.2g Tris, 8.5g Nacl

Target Details

Target:	MERTK
Alternative Name:	MERTK (MERTK Products)
Background:	Protein 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. Plays also 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. . Background: Proto-oncogene tyrosine-protein kinase MER, also called MERTK is an enzyme that in humans is encoded by the MERTK gene. This gene is a member of the MER/AXL/TYRO3 receptor kinase family and encodes a transmembrane protein with two fibronectin type-III domains, two Ig-like C2-type(immunoglobulin-like) domains, and one tyrosine kinase domain. This gene is mapped to 2q13. 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. This gene 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. Synonyms: Tyrosine-protein kinase Mer,2.7.10.1,Proto-oncogene c-Mer,Receptor tyrosine kinase MerTK,Mertk,Mer,

Target Details

	Full Gene Name: Tyrosine-protein kinase Mer Cellular Localisation: Membrane, Single-pass type I membrane protein.
Gene ID:	17289
UniProt:	Q60805
Pathways:	RTK Signaling

Application Details

Application Notes:	Before using Kit, spin tubes and bring down all components to bottom of tube. Duplicate well assay was recommended for both standard and sample testing.
Comment:	Sequence similarities: Belongs to the protein kinase superfamily. Tyr protein kinase family. AXL/UFO subfamily. Tissue Specificity: Expressed predominantly in the hematopoietic lineages: macrophages, NK cells, NKT cells, dendritic cells and platelets. .
Plate:	Pre-coated
Protocol:	mouse MER ELISA Kit was based on standard sandwich enzyme-linked immune-sorbent assay technology. A monoclonal antibody from rat specific for MER has been precoated onto 96-well plates. Standards(sf21, E23-F498) and test samples are added to the wells, a biotinylated detection polyclonal antibody from goat specific for MER is added subsequently and then followed by washing with PBS or TBS buffer. Avidin-Biotin-Peroxidase Complex was added and unbound conjugates were washed away with PBS or TBS buffer. HRP substrate TMB was used to visualize HRP enzymatic reaction. TMB was catalyzed by HRP to produce a blue color product that changed into yellow after adding acidic stop solution. The density of yellow is proportional to the mouse MER amount of sample captured in plate.
Assay Procedure:	Aliquot 0.1 mL per well of the 5000pg/mL, 2500pg/mL, 1250pg/mL, 625pg/mL, 313pg/mL, 156pg/mL, 78pg/mL mouse MER standard solutions into the pre-coated 96-well plate. Add 0.1 mL of the sample diluent buffer into the control well (Zero well). Add 0.1 mL of each properly diluted sample of mouse cell culture supernates, cell lysates, tissue homogenates or serum to each empty well. See "Sample Dilution Guideline" above for details. We recommend that each mouse MER standard solution and each sample is measured in duplicate.
Assay Precision:	• Sample 1: n=16, Mean(pg/ml): 568, Standard deviation: 25.56, CV(%): 4.5 • Sample 2: n=16, Mean(pg/ml): 1965, Standard deviation: 102.18, CV(%): 5.2 • Sample 3: n=16, Mean(pg/ml): 3223, Standard deviation: 183.7, CV(%): 5.7, • Sample 1: n=24, Mean(pg/ml): 790, Standard deviation: 45.82, CV(%): 5.8

Application Details

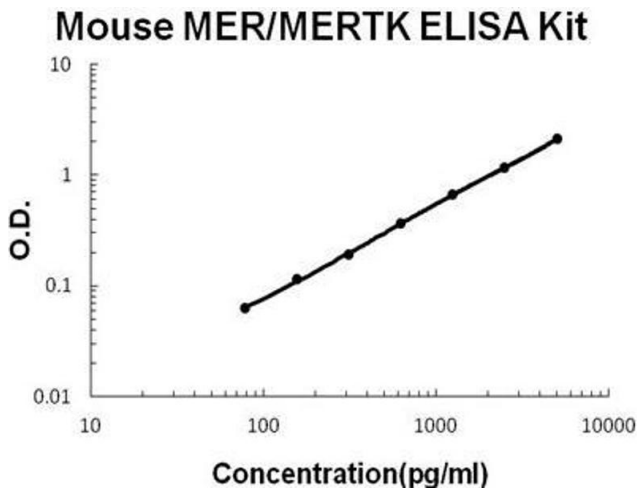
- Sample 2: n=24, Mean(pg/ml): 2135, Standard deviation: 140.91, CV(%): 6.6
- Sample 3: n=24, Mean(pg/ml): 3632, Standard deviation: 257.9, CV(%): 7.1

Restrictions:	For Research Use only

Handling

Handling Advice:	Avoid multiple freeze-thaw cycles.
Storage:	-20 °C,4 °C
Storage Comment:	Store at 4°C for 6 months, at -20°C for 12 months. Avoid multiple freeze-thaw cycles
Expiry Date:	12 months

Images



ELISA

Image 1. Mouse MER/MERTK PicoKine ELISA Kit standard curve