

Anti-Mouse TREM2 Antibody [PSH02-02] - BSA and Azide free (Capture)

HA721760



Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Mouse
Applications:	ELISA(Cap)
Molecular Wt:	Predicted band size: 24.5 kDa
Clone number:	PSH02-02

Description: Forms a receptor signaling complex with TYROBP which mediates signaling and cell activation following ligand binding. Acts as a receptor for amyloid-beta protein 42, a cleavage product of the amyloid-beta precursor protein APP, and mediates its uptake and degradation by microglia. Binding to amyloid-beta 42 mediates microglial activation, proliferation, migration, apoptosis and expression of pro-inflammatory cytokines, such as IL6R and CCL3, and the anti-inflammatory cytokine ARG1. Acts as a receptor for lipoprotein particles such as LDL, VLDL, and HDL and for apolipoproteins such as APOA1, APOA2, APOB, APOE, APOE2, APOE3, APOE4, and CLU and enhances their uptake in microglia. Binds phospholipids (preferably anionic lipids) such as phosphatidylserine, phosphatidylethanolamine, phosphatidylglycerol and sphingomyelin. Regulates microglial proliferation by acting as an upstream regulator of the Wnt/beta-catenin signaling cascade. Required for microglial phagocytosis of apoptotic neurons. Also required for microglial activation and phagocytosis of myelin debris after neuronal injury and of neuronal synapses during synapse elimination in the developing brain. Regulates microglial chemotaxis and process outgrowth, and also the microglial response to oxidative stress and lipopolysaccharide. It suppresses PI3K and NF-kappa-B signaling in response to lipopolysaccharide; thus promoting phagocytosis, suppressing pro-inflammatory cytokine and nitric oxide production, inhibiting apoptosis and increasing expression of IL10 and TGFB. During oxidative stress, it promotes anti-apoptotic NF-kappa-B signaling and ERK signaling. Plays a role in microglial MTOR activation and metabolism. Regulates age-related changes in microglial numbers.

Immunogen: Recombinant protein within Mouse TREM2 aa 19-171.

Positive control: Recombinant mouse Trem2 protein (HA211061).

Subcellular location: Cell membrane. Membrane. Secreted.

Database links: SwissProt: Q99NH8 Mouse

Recommended Dilutions:

ELISA(Cap) Use at an assay dependent concentration. Can be paired for Sandwich ELISA with Rabbit monoclonal [PSH02-03] to Mouse Trem2 (Detector) (HA721761) and Recombinant Mouse Trem2 protein (HA211061) as the standard. The reference range value is 37-3,000 pg/mL.

Storage Buffer: PBS (pH7.4).

Storage Instruction: Store at +4°C after thawing. Aliquot store at -20°C. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

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Images

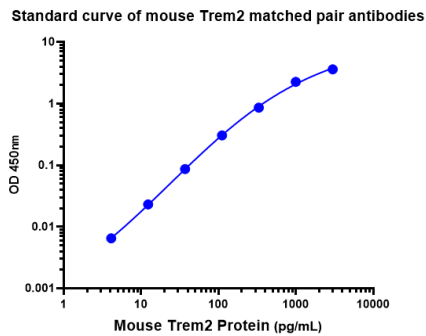


Fig1: Sandwich ELISA analysis of mouse Trem2 matched pair antibodies

Elisa assay was performed by coating wells of a 96-well plate with 100 μ l per well of capture antibody (HA721760) diluted in carbonate/bicarbonate buffer, at a concentration of 2 μ g/mL overnight at 4 $^{\circ}$ C. Wells of the plate were washed, blocked with 150 μ l 0.05% tween-20 1%BSA blocking buffer, and incubated with serial diluted mouse Trem2 protein (HA211061) starting from 3000 pg/ml to 0 pg/ml and detect antibody [PSH02-03]-Biotin (0.2 μ g/ml) for 1 hour at 30 $^{\circ}$ C with shaking. Then the plate was washed and incubated with 100 μ l per well of SA-HRP for 0.5 hour at 30 $^{\circ}$ C with shaking. Detection was performed using an Ultra TMB Substrate for 10 minutes at room temperature in the dark. The reaction was stopped with sulfuric acid and absorbances were read on a spectrophotometer at 450 nm.

Note: All products are "FOR RESEARCH USE ONLY AND ARE NOT INTENDED FOR DIAGNOSTIC OR THERAPEUTIC USE".

Background References

1. Qin Q et al. TREM2, microglia, and Alzheimer's disease. Mech Ageing Dev. 2021 Apr
2. Binnewies M et al. Targeting TREM2 on tumor-associated macrophages enhances immunotherapy. Cell Rep. 2021 Oct

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