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TREM2 Antibody (N-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP5469A

Specification

TREM2 Antibody (N-term) - Product Information

Application	**WB,E**
Primary Accession	O9NZC2
Other Accession	NP_061838.1
Reactivity	**Human**
Host	**Rabbit**
Clonality	**Polyclonal**
Isotype	**Rabbit IgG**
Antigen Region	**22-50**

TREM2 Antibody (N-term) - Additional Information

Gene ID 54209

Other Names
Triggering receptor expressed on myeloid cells 2, TREM-2, Triggering receptor expressed on monocytes 2, TREM2

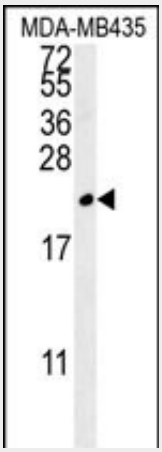
Target/Specificity
This TREM2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between a range from 22-50 amino acids of human TREM2.

Dilution
WB~~1:1000

Format
Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.

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
TREM2 Antibody (N-term) is for research use only and not for use in diagnostic or therapeutic procedures.



TREM2 Antibody (N-term) (Cat.#AP5469a) western blot analysis in MDA-MB435 cell line lysates (35ug/lane).This demonstrates the TREM2 antibody detected the TREM2 protein (arrow).

TREM2 Antibody (N-term) - Background

TREM2 is a membrane protein that forms a receptor signaling complex with TYROBP. The encoded protein may be involved in chronic inflammation by triggering the production of constitutive inflammatory cytokines. Defects in this gene are a cause of polycystic lipomembranous osteodysplasia with sclerosing leukoencephalopathy (PLOSL).

TREM2 Antibody (N-term) - References

Stefano, L., et al. J. Neurochem. 110(1):284-294(2009)
Ford, J.W., et al. Curr. Opin. Immunol. 21(1):38-46(2009)

TREM2 Antibody (N-term) - Protein Information

Name TREM2

Function
Forms a receptor signaling complex with TYROBP which mediates signaling and cell activation following ligand binding (PubMed:10799849). 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 (PubMed:27477018, PubMed:29518356). 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 (By similarity). 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 (PubMed:27477018). Binds phospholipids (preferably anionic lipids) such as phosphatidylserine, phosphatidylethanolamine, phosphatidylglycerol and sphingomyelin (PubMed:29794134). Regulates microglial proliferation by acting as an upstream regulator of the Wnt/beta-catenin signaling cascade (By similarity). Required for microglial phagocytosis of apoptotic neurons (PubMed:24990881). Also required for microglial activation and phagocytosis of myelin debris after neuronal injury and of neuronal synapses during synapse elimination in the developing brain (By similarity). Regulates microglial chemotaxis and process outgrowth, and also the microglial response

to oxidative stress and lipopolysaccharide (By similarity). 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 (By similarity). During oxidative stress, it promotes anti-apoptotic NF- kappa-B signaling and ERK signaling (By similarity). Plays a role in microglial MTOR activation and metabolism (By similarity). Regulates age-related changes in microglial numbers (PubMed:29752066). Triggers activation of the immune responses in macrophages and dendritic cells (PubMed:10799849). Mediates cytokine-induced formation of multinucleated giant cells which are formed by the fusion of macrophages (By similarity). In dendritic cells, it mediates up-regulation of chemokine receptor CCR7 and dendritic cell maturation and survival (PubMed:11602640). Involved in the positive regulation of osteoclast differentiation (PubMed:12925681).

Cellular Location
[Isoform 1]: Cell membrane; Single-pass type I membrane protein [Isoform 3]: Secreted.

Tissue Location
Expressed in the brain, specifically in microglia and in the fusiform gyrus (at protein level) (PubMed:28802038, PubMed:28855300, PubMed:27477018, PubMed:29752066). Expressed on macrophages and dendritic cells but not on granulocytes or monocytes (PubMed:10799849, PubMed:28855301). In the CNS strongest expression seen in the basal ganglia, corpus callosum, medulla oblongata and spinal cord (PubMed:12080485).

TREM2 Antibody (N-term) - Protocols

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Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture