

## ARG42050 anti-TREM2 antibody

Package: 100 µl  
Store at: -20°C

### Summary

Product Description	Rabbit Polyclonal antibody recognizes TREM2
Tested Reactivity	Hu, Ms, Rat
Tested Application	ICC/IF, WB
Host	Rabbit
Clonality	Polyclonal
Isotype	IgG
Target Name	TREM2
Species	Human
Immunogen	Recombinant fusion protein corresponding to aa. 19-160 of Human TREM2 (NP_061838.1).
Conjugation	Un-conjugated
Alternate Names	Trem2a; Trem2b; TREM-2; Triggering receptor expressed on myeloid cells 2; Triggering receptor expressed on monocytes 2; Trem2c

### Application Instructions

Application table	Application	Dilution
	ICC/IF	1:50 - 1:100
	WB	1:500 - 1:1000
Application Note	* The dilutions indicate recommended starting dilutions and the optimal dilutions or concentrations should be determined by the scientist.	

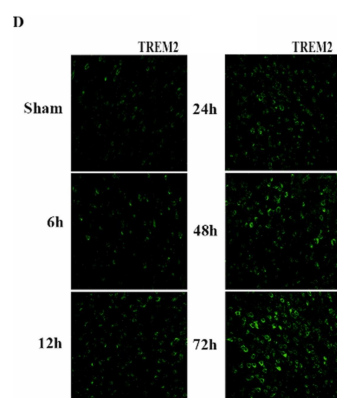
### Properties

Form	Liquid
Purification	Affinity purified.
Buffer	PBS (pH 7.3), 0.02% Sodium azide and 50% Glycerol.
Preservative	0.02% Sodium azide
Stabilizer	50% Glycerol
Storage instruction	For continuous use, store undiluted antibody at 2-8°C for up to a week. For long-term storage, aliquot and store at -20°C. Storage in frost free freezers is not recommended. Avoid repeated freeze/thaw cycles. Suggest spin the vial prior to opening. The antibody solution should be gently mixed before use.
Note	For laboratory research only, not for drug, diagnostic or other use.

### Bioinformation

Gene Symbol	TREM2
Gene Full Name	triggering receptor expressed on myeloid cells 2
Background	This gene encodes a membrane protein that forms a receptor signaling complex with the TYRO protein tyrosine kinase binding protein. The encoded protein functions in immune response and 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). Alternative splicing results in multiple transcript variants encoding different isoforms. [provided by RefSeq, Nov 2012]
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 TGF $\beta$ (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). [UniProt]
Calculated Mw	25 kDa
Cellular Localization	Isoform 1: Cell membrane; Single-pass type I membrane protein. Isoform 2: Secreted. Isoform 3: Secreted. [UniProt]

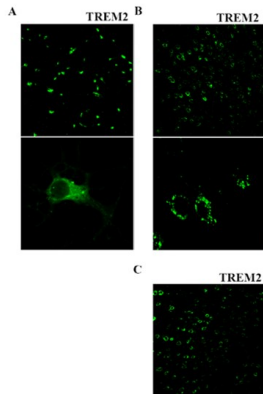
## Images



ARG42050 anti-TREM2 antibody ICC/IF image

Immunofluorescence: Mouse cerebral penumbra cortex stained with ARG42050 anti-TREM2 antibody at 1:200 dilution.

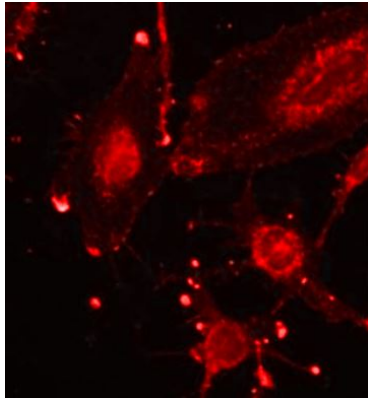
From Manping Yang et al. Brain Res Bull. (2023), [doi: 10.1016/j.brainresbull.2022.11.021](https://doi.org/10.1016/j.brainresbull.2022.11.021), Fig. 1D.



#### ARG42050 anti-TREM2 antibody IHC-Fr image

Immunohistochemistry: Mouse brain stained with ARG42050 anti-TREM2 antibody at 1:200 dilution.

From Manping Yang et al. Brain Res Bull. (2023), [doi: 10.1016/j.brainresbull.2022.11.021](https://doi.org/10.1016/j.brainresbull.2022.11.021), Fig. S1.



#### ARG42050 anti-TREM2 antibody ICC/IF image

Immunofluorescence: U-251MG cells stained with ARG42050 anti-TREM2 antibody at 1:100 dilution. DAPI (blue) for nuclear staining.