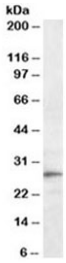
Trem2 Antibody / Triggering receptor expressed on myeloid cells 2 (R35499)

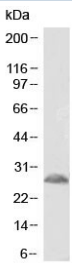
Catalog No.	Formulation	Size
R35499-100UG	0.5 mg/ml in 1X TBS, pH7.3, with 0.5% BSA (US sourced) and 0.02% sodium azide	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Mouse
Format	Antigen affinity purified
Host	Goat
Clonality	Polyclonal (goat origin)
Isotype	Goat Ig
Purity	Antigen affinity
Gene ID	83433
Applications	Western Blot : 0.3-1ug/ml ELISA (peptide) LOD : 1:16000
Limitations	This Trem2 antibody is available for research use only.



Western blot testing of mouse liver lysate with Trem2 antibody at 0.3ug/ml. Predicted molecular weight ~25 kDa.



Western blot testing of mouse spinal chord lysate with Trem2 antibody at 1ug/ml. Predicted molecular weight ~25 kDa.

Description

TREM2 antibody is a valuable reagent for investigating Alzheimer disease, dementia, and microglial biology. Triggering receptor expressed on myeloid cells 2 (TREM2) is a transmembrane receptor expressed on microglia and myeloid cells that regulates phagocytosis, lipid metabolism, and immune responses. Through its association with DAP12, TREM2 initiates intracellular signaling that promotes cell survival, migration, and debris clearance.

Variants of TREM2 are strongly associated with increased risk of Alzheimer disease and other dementias. These genetic findings highlight TREM2 as a critical regulator of microglial responses to amyloid beta plaques and neurodegeneration. Microglia expressing functional TREM2 migrate toward plaques, internalize amyloid fibrils, and secrete cytokines that shape the inflammatory environment. When TREM2 signaling is impaired, amyloid accumulation accelerates and neuronal injury worsens.

In addition to Alzheimer disease, TREM2 is implicated in other neurodegenerative disorders such as Parkinson disease and amyotrophic lateral sclerosis. Altered TREM2 expression in these conditions points to its broader role in regulating neuroinflammation and microglial homeostasis. Because soluble TREM2 can be detected in cerebrospinal fluid, it is also being studied as a biomarker for disease progression and therapeutic monitoring.

On the molecular level, TREM2 contains an immunoglobulin-like extracellular domain that binds ligands including lipids and apolipoproteins. Ligand binding triggers DAP12 phosphorylation and activation of SYK dependent signaling cascades. These events support cytoskeletal remodeling, vesicle trafficking, and metabolic adaptation in microglia. Such mechanisms enable microglia to respond to diverse environmental cues in the brain.

The TREM2 antibody is widely used in western blotting, immunohistochemistry, immunofluorescence, and flow cytometry to detect expression and localization in the brain. These applications are essential for mapping plaque-associated microglia, evaluating therapeutic interventions, and exploring TREM2 as a diagnostic biomarker. For scientists focused on dementia and microglial biology, the TREM2 antibody provides a reliable detection tool. NSJ Bioreagents offers validated antibodies to support reproducibility and accuracy in advanced molecular studies.

Application Notes

Optimal dilution of the Trem2 antibody should be determined by the researcher.

Immunogen

Amino acids QVEHSTSRNQET were used as the immunogen for this Trem2 antibody.

Storage

Aliquot and store the Trem2 antibody at -20oC.