TREM2 Antibody / Triggering receptor expressed on myeloid cells 2 (F49197)

Catalog No.	Formulation	Size
F49197-0.2ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.2 ml
F49197-0.05ML	In 1X PBS, pH 7.4, with 0.09% sodium azide	0.05 ml

Bulk quote request

Availability	1-3 business days
Species Reactivity	Human
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Purity	Antigen affinity
UniProt	Q9NZC2
Applications	Western Blot : 1:1000
Limitations	This TREM2 antibody is available for research use only.

TREM2 antibody western blot analysis in MDA-MB435 lysate. Predicted molecular weight ~25kDa.

Description

TREM2 antibody is an essential reagent for studying lipid metabolism, immune regulation, and cardiovascular disease. Triggering receptor expressed on myeloid cells 2 (TREM2) is expressed by macrophages, dendritic cells, and microglia, where it regulates lipid uptake, survival, and phagocytosis. Its signaling through DAP12 activates pathways that adapt immune cells to lipid rich environments.

In atherosclerosis, macrophages expressing TREM2 accumulate in lipid-laden plaques, where they engulf modified

lipoproteins and contribute to foam cell formation. These Trem2 positive macrophages have distinct transcriptional profiles associated with lipid metabolism and inflammation. By controlling cholesterol handling and inflammatory responses, TREM2 plays a role in shaping plaque stability and cardiovascular risk. Studies suggest that modulating TREM2 may offer new therapeutic approaches for metabolic and vascular disease.

Beyond cardiovascular biology, TREM2 is essential in obesity and metabolic syndrome, where macrophages in adipose tissue express high levels of TREM2. These cells regulate adipose inflammation and lipid storage, influencing systemic metabolic health. Dysregulation of TREM2 signaling contributes to insulin resistance and chronic inflammation in metabolic disorders.

At the molecular level, TREM2 binds lipids, apolipoproteins, and cellular debris, transmitting signals through DAP12 and SYK kinase to regulate cytoskeletal remodeling and vesicular trafficking. These processes enable macrophages and microglia to adapt to challenging tissue environments.

The TREM2 antibody is widely used in immunohistochemistry, immunofluorescence, western blotting, and flow cytometry to detect expression in immune cells and tissues. These applications are valuable for research into atherosclerosis, obesity, and lipid metabolism. For scientists exploring the intersection of metabolism and immunity, the TREM2 antibody provides a specific and reliable tool. NSJ Bioreagents offers validated antibodies that ensure reproducibility and accuracy in advanced molecular studies.

Application Notes

Titration of the TREM2 antibody may be required due to differences in protocols and secondary/substrate sensitivity.

Immunogen

A portion of amino acids 22-50 from the human protein was used as the immunogen for this TREM2 antibody.

Storage

Aliquot the TREM2 antibody and store frozen at -20oC or colder. Avoid repeated freeze-thaw cycles.