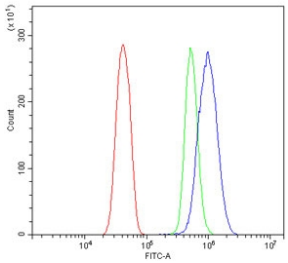
Trem2 Antibody / Triggering receptor expressed on myeloid cells 2 (RQ6214)

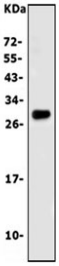
Catalog No.	Formulation	Size
RQ6214	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

Availability	1-3 business days
Species Reactivity	Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose and 0.0125% sodium azide
UniProt	D3ZZ89
Applications	Western Blot : 1-2ug/ml Flow Cytometry : 1-3ug/million cells Direct ELISA : 0.1-0.5ug/ml
Limitations	This Trem2 antibody is available for research use only.



Flow cytometry testing of rat RH35 cells with Trem2 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= Trem2 antibody.



Western blot testing of rat C6 cell lysate with Trem2 antibody. Predicted molecular weight ~25 kDa.

Description

TREM2 antibody is a useful tool for investigating myeloid cell function and neuroinflammation in rat systems. In rats, triggering receptor expressed on myeloid cells 2 (Trem2) is expressed by microglia, macrophages, and dendritic cells. Its signaling through the adaptor DAP12 promotes phagocytosis, lipid uptake, and cytokine regulation, making it critical for brain and immune homeostasis in rat experimental models.

Rat Trem2 expression has been studied in models of stroke, traumatic brain injury, and neurodegeneration. In these settings, Trem2 positive microglia accumulate at sites of injury where they clear cellular debris and limit inflammation. Impaired Trem2 signaling reduces phagocytic capacity and worsens neuronal damage, highlighting its protective role in the rat nervous system. Beyond the brain, Trem2 contributes to macrophage biology in peripheral organs, where it regulates lipid metabolism and tissue remodeling.

At the molecular level, rat Trem2 shares structural features with its human and mouse counterparts, including an extracellular immunoglobulin-like domain, a transmembrane region linked to DAP12, and a cytoplasmic tail. Signaling through DAP12 involves phosphorylation of ITAM motifs and activation of SYK, leading to downstream pathways that control cytoskeletal dynamics and cytokine production.

The TREM2 antibody is widely applied in rat tissues using immunohistochemistry, immunofluorescence, western blotting, and flow cytometry. These applications are essential for understanding microglial biology in injury models, studying chronic inflammation, and exploring metabolic processes in the rat. For scientists using rat systems to model human disease, the TREM2 antibody provides a specific and reliable reagent. NSJ Bioreagents supplies validated antibodies that deliver reproducibility and precision in advanced molecular studies.

Application Notes

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

Immunogen

A rat recombinant partial protein (amino acids L19-D131) was used as the immunogen for the Trem2 antibody.

Storage

After reconstitution, the Trem2 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.