# Mouse TREM-1 Antibody

Monoclonal Rat $IgG_{2A}$ Clone # 174031

Catalog Number: MAB1187

## DESCRIPTION

| | |
|---|---|
| **Species Reactivity** | Mouse |
| **Specificity** | Detects mouse TREM-1 in direct ELISAs and Western blots. In Western blots, no cross-reactivity with recombinant mouse TREM-2B, recombinant human (rh) TREM-1, or rhTREM-2 is observed. |
| **Source** | Monoclonal Rat $IgG_{2A}$ Clone # 174031 |
| **Purification** | Protein A or G purified from hybridoma culture supernatant |
| **Immunogen** | Mouse myeloma cell line NS0-derived recombinant mouse TREM-1<br>Ala21-Ser202<br>Accession # Q9JKE2 |
| **Endotoxin Level** | <0.10 EU per 1 µg of the antibody by the LAL method. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.<br>*Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS. |

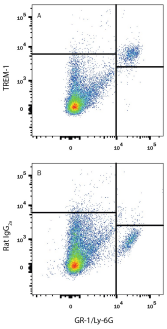
## APPLICATIONS

**Please Note:** *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

| | Recommended Concentration | Sample |
|---|---|---|
| **Western Blot** | 1 µg/mL | Recombinant Mouse TREM-1 Fc Chimera (Catalog # 1187-TR) |
| **Flow Cytometry** | 0.25 µg/$10^6$ cells | See Below |
| **Immunocytochemistry** | 8-25 µg/mL | See Below |
| **CyTOF-ready** | Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation. | |
| **Agonist Activity** | Measured by its ability to stimulate TNF-α secretion by P388D1 mouse lymphoma cells (ATCC # TIB-63). Bouchon, A. *et al.* (2001) Nature, **410**:1103 and Bouchon, A. *et al.* (2000) J. Immunology, **164**:4991. The $ED_{50}$ for this effect is typically 2-12 µg/mL. | |

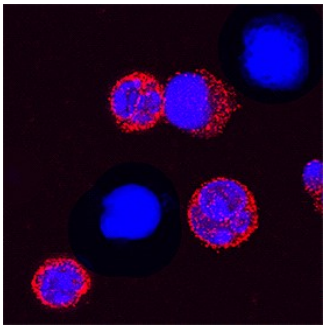
## DATA

### Flow Cytometry




**Detection of TREM-1 in Mouse Splenocytes by Flow Cytometry.** Mouse splenocytes were stained with Rat Anti-Mouse Gr-1/Ly-6G Alexa Fluor® 405-conjugated Monoclonal Antibody (Catalog # FAB1037V) and either (A) Rat Anti-Mouse TREM-1 Monoclonal Antibody (Catalog # MAB1187) or (B) Rat $IgG_{2A}$ Isotype Control (Catalog # MAB006) followed by Phycoerythrin-conjugated Anti-Rat IgG Secondary Antibody (Catalog # F0105B).

### Immunocytochemistry



**TREM-1 in Mouse Splenocytes.** TREM-1 was detected in immersion fixed mouse splenocytes treated with LPS using Rat Anti-Mouse TREM-1 Monoclonal Antibody (Catalog # MAB1187) at 15 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rat IgG Secondary Antibody (red; Catalog # NL013) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Non-adherent Cells.

## PREPARATION AND STORAGE

| | |
|---|---|
| **Reconstitution** | Reconstitute at 0.5 mg/mL in sterile PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.<br>*Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 6 months, -20 to -70 °C under sterile conditions after reconstitution. |



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## BACKGROUND

TREM-1 (Triggering Receptor Expressed on Myeloid cells) is a type I transmembrane protein having a single Ig-like domain. It associates with the adapter protein, DAP12, to deliver an activating signal. Several other TREM family members have been reported that are structurally similar but share less than 30% amino acid identity. TREM-1 is expressed on blood neutrophils and a subset of monocytes, and expression is up-regulated by bacterial LPS. Engagement of TREM-1 with a monoclonal antibody leads to expression of IL-8, MCP-1, and TNF-α suggesting that this receptor plays an important role in inflammatory responses. TREM-1 is expressed at high levels on neutrophils of patients with microbial sepsis and in mice with LPS-induced shock. Blockade of TREM-1 with a TREM-1/Fc fusion protein protected mice against LPS-induced shock.

**References:**

1. Bouchon, A. (2000) J. Immunol. **164**:4991.
2. Bouchon, A. (2001) Nature **410**:1103.
3. Nathan, C. and A. Ding (2001) Nature Med. **7**:530.



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