

Product datasheet for **CL044R**

Tnfrsf1a Rat Monoclonal Antibody [Clone ID: HM104]

Product data:

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| Product Type: | Primary Antibodies |
| Clone Name: | HM104 |
| Applications: | FC |
| Recommended Dilution: | Flow Cytometry. |
| Reactivity: | Mouse |
| Host: | Rat |
| Isotype: | IgG2a |
| Clonality: | Monoclonal |
| Specificity: | This Antibody reacts with the extracellular part of the Mouse TNF-Receptor (p55) and with the soluble receptor. |
| Formulation: | PBS containing 0.09% Sodium Azide as preservative and EIA grade BSA as a stabilizing protein to bring total protein concentration to 4-5 mg/ml. Label: PE State: Liquid purified IgG fraction Label: R-Phycoerythrin |
| Concentration: | lot specific |
| Conjugation: | PE |
| Storage: | Store the antibody undiluted at 2-8°C. DO NOT FREEZE! This antibody is photosensitive and should be protected from light. |
| Stability: | Shelf life: one year from despatch. |
| Gene Name: | tumor necrosis factor receptor superfamily, member 1a |
| Database Link: | Entrez Gene 21937 Mouse P25118 |



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Background:

Tumor Necrosis Factor (TNF) is a cytokine whose function is mediated through two distinct cell surface receptors (TNF Receptor I and TNF Receptor II) that are included in the TNF Receptor superfamily along with FAS antigen and CD40. TNF Receptors I and II are 55 and 75 kDa members, respectively, of a family of cell surface molecules including nerve growth factor receptor, Fas/Apo1, CD30, OX40, and 41BB, which are characterized by cysteine rich motifs in the extracellular domain. While TNF Receptor I and TNF Receptor II share 28% sequence homology in the extracellular domains, their intracellular domains lack sequence homology, suggesting that they differ in their internal signal transduction pathways. TNF Receptor I contains an approximately 80 amino acid death domain near its carboxy terminus capable of transmitting an apoptotic signal through its interaction with TRADD (TNF Receptor I associated death domain protein), and subsequent interactions with FADD. TNF Receptor I can also activate the transcription factor NFkB via TRAF2 (TNF Receptor associated factor 2). The cytoplasmic domain of TNF Receptor I can directly interact with Jak kinase, thereby activating the JAK/STAT signal transduction cascade. TNF Receptor I is expressed by virtually all nucleated mammalian cells, including hepatocytes, monocytes and neutrophils, cardiac muscle cells, endothelial cells, and CD34 + hematopoietic progenitors. Both TNF alpha and TNF beta bind to TNF Receptor I.

Synonyms:

Tumor necrosis factor receptor 1, TNF-R1, TNF-RI, TNFR-I, p55, p60, Tnfrsf1a

Note: Protocol: **FLOW CYTOMETRY ANALYSIS:**

Method:

1. Prepare a cell suspension in media A. For cell preparations, deplete the red blood cell population with Lympholyte®-M cell separation medium.
2. Wash 2 times.
3. Resuspend the cells to a concentration of 2×10^7 cells/ml in media A. Add 50 μ l of this suspension to each tube (each tube will then contain 1×10^6 cells, representing 1 test).
4. To each tube, add $\sim 1.0 \mu\text{g}^*$ of this Ab per 10^6 cells.
5. Vortex the tubes to ensure thorough mixing of antibody and cells.
6. Incubate the tubes for 30 minutes at 4°C . (It is recommended that the tubes are protected from light, since most fluorochromes are light sensitive.)
7. Wash 2 times at 4°C .
8. Resuspend the cell pellet in 50 μ l ice cold media B.
9. Transfer to suitable tubes for flow cytometric analysis containing 15 μ l of propidium iodide at 0.5 mg/ml in PBS. This stains dead cells by intercalating in DNA.

Media:

- A. Phosphate buffered saline (pH 7.2) + 5% normal serum of host species + Sodium Azide (100 μ l of 2M Sodium Azide in 100 mls).
- B. Phosphate buffered saline (pH 7.2) + 0.5% Bovine Serum Albumin + Sodium Azide (100 μ l of 2M Sodium Azide in 100 mls).

Tissue Distribution by Flow Cytometry Analysis:

Mouse Strain: CBA

Cell Concentration: 1×10^6 cells per test

Antibody Concentration Used: $1.0 \mu\text{g}/10^6$ cells

Isotypic Control: PE Rat IgG2a

Cell Source: Spleen

Percentage of Cells Stained Above Control: 7.10%

Product images:

