

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse TREM2 in direct ELISAs and Western blots.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse TREM2b Leu19-Pro168 Accession # Q99NH8
Conjugate	Alexa Fluor 488 Excitation Wavelength: 488 nm Emission Wavelength: 515-545 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide
*Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.	

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.

Knockout Validated	Optimal dilution of this antibody should be experimentally determined.
Western Blot	Optimal dilution of this antibody should be experimentally determined.
ELISA	Optimal dilution of this antibody should be experimentally determined.
Immunocytochemistry	Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

TREM2 (Triggering Receptor Expressed by Myeloid cells) is an Ig superfamily cell surface receptor that activates a number of myeloid cell types (1). It is a member of a small gene family located on human chromosome 6p21 and mouse chromosome 17 in a region linked to the MHC (2). A single human TREM2 gene has been described, however, two closely related orthologs were reported in mouse (3). The proteins differ by only three amino acids and were designated TREM2a and TREM2b. TREM2 is type I transmembrane protein consisting of a single extracellular immunoglobulin (V-like) domain, a transmembrane domain with a positively charged lysine residue, and a short cytoplasmic tail (1). It associates with the signal adapter protein, DAP12, for signaling and function. DAP12 has a cytoplasmic ITAM that is phosphorylated upon ligand binding leading to the subsequent activation of cytoplasmic tyrosine kinases. TREM2 is expressed by immature monocyte-derived dendritic cells (DC), and expression is down-regulated upon activation of DC by microbial products and costimulatory signals (4). Ligation of TREM2 on immature DC with anti-TREM2 antibodies results in partial DC activation and the up-regulation of CCR7 and some co-stimulatory molecules. A role for TREM2 in the functioning of osteoclasts and microglia is suggested by the discovery that homozygous loss-of-function mutations in either TREM2 or DAP12 result in Nasu-Hakola disease characterized by a combination of presenile dementia and bone cysts (5). *In vitro* studies indicate that the differentiation of myeloid precursors into osteoclasts is dramatically impaired in TREM2 deficient individuals (6).

PRODUCT SPECIFIC NOTICES

This product is provided under an agreement between Life Technologies Corporation and R&D Systems, Inc., and the manufacture, use, sale or import of this product is subject to one or more US patents and corresponding non-US equivalents, owned by Life Technologies Corporation and its affiliates. The purchase of this product conveys to the buyer the non-transferable right to use the purchased amount of the product and components of the product only in research conducted by the buyer (whether the buyer is an academic or for-profit entity). The sale of this product is expressly conditioned on the buyer not using the product or its components (1) in manufacturing; (2) to provide a service, information, or data to an unaffiliated third party for payment; (3) for therapeutic, diagnostic or prophylactic purposes; (4) to resell, sell, or otherwise transfer this product or its components to any third party, or for any other commercial purpose. Life Technologies Corporation will not assert a claim against the buyer of the infringement of the above patents based on the manufacture, use or sale of a commercial product developed in research by the buyer in which this product or its components was employed, provided that neither this product nor any of its components was used in the manufacture of such product. For information on purchasing a license to this product for purposes other than research, contact Life Technologies Corporation, Cell Analysis Business Unit, Business Development, 29851 Willow Creek Road, Eugene, OR 97402, Tel: (541) 465-8300. Fax: (541) 335-0354.