

# TREM-2 (E-20): sc-22633

## BACKGROUND

Polycystic lipomembranous osteodysplasia with sclerosing leukoencephalopathy (PLOS), known as "Nasu-Hakola disease," is a recessively inherited disease where individuals display early-onset progressive dementia and bone cysts, which leads to death. Mutations in TYROBP (DAP12), which codes for a membrane receptor component in natural-killer and myeloid cells and mutations in triggering receptor expressed on myeloid cells-2 (TREM-2), correlate well to the pathology of PLOS. TREM-2 is a cell surface receptor on human monocyte-derived dendritic cells that forms a receptor signaling complex with DAP12 and triggers activation of the immune response in macrophages and dendritic cells (DC). The TREM-2/DAP12 complex is a molecular promoter of upregulation of C-C chemokine receptor 7, partial DC maturation and DC survival through activation of protein tyrosine kinases and extracellular signal-regulated kinase. The human chronic inflammatory TREM-2 gene maps to chromosome 6p21.1 and encodes a 230 amino acid protein.

## REFERENCES

1. Bouchon, A., Hernandez-Munain, C., Cella, M. and Colonna, M. 2001. A DAP12-mediated pathway regulates expression of C-C chemokine receptor 7 and maturation of human dendritic cells. *J. Exp. Med.* 194: 1111-1122.
2. Daws, M.R., Lanier, L.L., Seaman, W.E. and Ryan, J.C. 2001. Cloning and characterization of a novel mouse myeloid DAP12-associated receptor family. *Eur. J. Immunol.* 31: 783-791.
3. Paloneva, J., Manninen, T., Christman, G., Hovanes, K., Mandelin, J., Adolfsson, R., Bianchin, M., Bird, T., Miranda, R., Salmaggi, A., Tranebjaerg, L., Konttinen, Y. and Peltonen, L. 2002. Mutations in two genes encoding different subunits of a receptor signaling complex result in an identical disease phenotype. *Am. J. Hum. Genet.* 71: 656-662.
4. Online Mendelian Inheritance in Man, OMIM<sup>™</sup>. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605086. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

## CHROMOSOMAL LOCATION

Genetic locus: TREM2 (human) mapping to 6p21.1.

## SOURCE

TREM-2 (E-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of TREM-2 of human origin.

## PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-22633 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## STORAGE

Store at 4° C, \*\*DO NOT FREEZE\*\*. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

## APPLICATIONS

TREM-2 (E-20) is recommended for detection of TREM-2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for TREM-2 siRNA (h): sc-43001.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz<sup>™</sup> Mounting Medium: sc-24941.

## RESEARCH USE

For research use only, not for use in diagnostic procedures.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.


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Try **TREM-2 (B-3): sc-373828**, our highly recommended monoclonal alternative to TREM-2 (E-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **TREM-2 (B-3): sc-373828**.