

OSCAR (M-17): sc-34237

BACKGROUND

Osteoclasts regulate homeostasis of bone development. Osteoclast-associated receptor (OSCAR) functions critically in osteoclast differentiation, and is a member of the leukocyte receptor complex (LRC) protein family that plays critical roles in the regulation of both innate and adaptive immune responses. Different from the other LRC members, OSCAR expression is detected specifically in preosteoclasts or mature osteoclasts. The Fc γ chain, a signal transducing adaptor molecule for Fc receptors, associates with OSCAR and is involved in the cell surface expression of OSCAR, which regulates differentiation. Human OSCAR is continually expressed during differentiation of CD14⁺ monocytes into dendritic cells and after maturation.

REFERENCES

1. Merck, E., et al. 2004. OSCAR is an Fc γ -associated receptor that is expressed by myeloid cells and is involved in antigen presentation and activation of human dendritic cells. *Blood* 104: 1386-1395.
2. Shikawa, S., et al. 2004. Involvement of Fc γ in signal transduction of osteoclast-associated receptor (OSCAR). *Int. Immunol.* 16: 1019-1025.
3. Boabaid, F., et al. 2004. The role of parathyroid hormone-related protein in the regulation of osteoclastogenesis by cementoblasts. *J. Periodontol.* 75: 1247-1254.
4. Mocsai, A., et al. 2004. The immunomodulatory adapter proteins DAP12 and Fc receptor γ -chain (Fc γ) regulate development of functional osteoclasts through the Syk tyrosine kinase. *Proc. Natl. Acad. Sci. USA* 101: 6158-6163.
5. Merck, E., et al. 2005. Fc receptor γ -chain activation via hOSCAR induces survival and maturation of dendritic cells and modulates Toll-like receptor responses. *Blood* 105: 3623-3632.

CHROMOSOMAL LOCATION

Genetic locus: Oscar (mouse) mapping to 7 A1.

SOURCE

OSCAR (M-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of OSCAR of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-34237 P, (100 μ g 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

APPLICATIONS

OSCAR (M-17) is recommended for detection of OSCAR of mouse 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 OSCAR siRNA (m): sc-45305, OSCAR shRNA Plasmid (m): sc-45305-SH and OSCAR shRNA (m) Lentiviral Particles: sc-45305-V.

Molecular Weight of OSCAR: 31 kDa.

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™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ 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™ Mounting Medium: sc-24941.

SELECT PRODUCT CITATIONS

1. Nunes, A.F., et al. 2010. Neuropeptide Y expression and function during osteoblast differentiation—insights from transthyretin knockout mice. *FEBS J.* 277: 263-275.
2. Qing Hong, Z., et al. 2013. The effect of rotative stress on CAIL, FAS, FASL, OSCAR, and TRAP gene expression in osteoclasts. *J. Cell. Biochem.* 114: 388-397.

RESEARCH USE

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