

EMR2 (L-17): sc-34334

BACKGROUND

The epidermal growth factor (EGF) family constitutes a group of class B, G protein-coupled receptors, which includes CD97 and EMR2. EMR2 is a member of the EGF-TM7 receptor subfamily. EGF-TM7 receptors are a family of class B, seven-span transmembrane (TM7) receptors predominantly expressed by cells of the immune system. Within the TM7 superfamily, the molecular structure and ligand-binding properties of EGF-TM7 receptors are unique. Derived from the processing of a single polypeptide, they are expressed at the cell surface as heterodimers consisting of a large extracellular region associated with a TM7 moiety. Through a variable number of N-terminal EGF-like domains, EGF-TM7 receptors interact with cellular ligands such as CD55 and chondroitin sulfate. EMR2 is a heptahelical molecule predominantly expressed on cells of the immune system such as leukocytes. EMR2 is proteolytically cleaved into two separate subunits: a seven-transmembrane subunit, and an extracellular α subunit.

REFERENCES

- Lin, H.H., et al. 2000. Human EMR2, a novel EGF-TM7 molecule on chromosome 19p13.1, is closely related to CD97. *Genomics* 67: 188-200.
- Kwakkenbos, M.J., et al. 2002. The human EGF-TM7 family member EMR2 is a heterodimeric receptor expressed on myeloid cells. *J. Leukoc. Biol.* 71: 854-862.
- Chang, G.W., et al. 2003. Proteolytic cleavage of the EMR2 receptor requires both the extracellular stalk and the GPS motif. *FEBS Lett.* 547: 145-150.
- Stacey, M., et al. 2003. The epidermal growth factor-like domains of the human EMR2 receptor mediate cell attachment through chondroitin sulfate glycosaminoglycans. *Blood* 102: 2916-2924.
- Kwakkenbos, M.J., et al. 2005. Expression of the largest CD97 and EMR2 isoforms on leukocytes facilitates a specific interaction with chondroitin sulfate on B cells. *J. Leukoc. Biol.* 77: 112-119.
- Kop, E.N., et al. 2005. Identification of the epidermal growth factor-TM7 receptor EMR2 and its ligand dermatan sulfate in rheumatoid synovial tissue. *Arthritis Rheum.* 52: 442-450.

CHROMOSOMAL LOCATION

Genetic locus: EMR2 (human) mapping to 19p13.1.

SOURCE

EMR2 (L-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular α subunit domain of EMR2 of human 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-34334 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

EMR2 (L-17) is recommended for detection precursor and α subunit of EMR2 of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1–2 μ g per 100–500 μ g of total protein (1 ml of cell lysate)], 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 EMR2 siRNA (h): sc-45381.

Molecular Weight of EMR2 uncleaved precursor: 110 kDa.

Molecular Weight of EMR2 α subunit: 70-75 kDa.

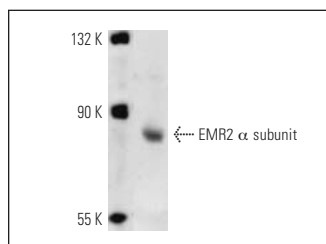
Molecular Weight of EMR2 β subunit: 38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



EMR2 (L-17): sc-34334. Western blot analysis of EMR2 α subunit expression in Jurkat whole cell lysate.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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