



## EMR2 (A-20): sc-34336

### 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  $\alpha$  subunit.

### REFERENCES

1. 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.
2. 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.
3. 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.
4. 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.
5. 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.
6. 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 (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular  $\alpha$  subunit domain of EMR2 of human origin.

### PRODUCT

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

Blocking peptide available for competition studies, sc-34336 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### APPLICATIONS

EMR2 (A-20) is recommended for detection of precursor and  $\alpha$  subunit of EMR2 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 EMR2 siRNA (h): sc-45381.

Molecular Weight of EMR2 uncleaved precursor: 110 kDa.

Molecular Weight of EMR2  $\alpha$  subunit: 70-75 kDa.

Molecular Weight of EMR2  $\beta$  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) 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.

### 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](http://www.scbt.com) or our catalog for detailed protocols and support products.