SANTA CRUZ BIOTECHNOLOGY, INC.

F4/80 (A-19): sc-26642

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The epidermal growth factor (EGF)-TM7 family constitutes a group of class B G protein-coupled receptors, which includes CD97, EMR1 (EGF-like molecule containing mucin-like hormone receptor 1, designated F4/80 in mouse), EMR2, EMR3, FIRE, and ETL. These family members are characterized by an extended extracellular region with several N-terminal EGF domains, and are predominantly expressed on cells of the immune system. The EGF-TM7 protein family are encoded by a gene cluster on human chromosome 19p13. The F4/80 molecule is solely expressed on the surface of macrophages and serves as a marker for mature macrophage tissues, including Kupffer cells in liver, splenic red pulp macrophages, brain microglia, gut lamina propria, and Langerhans cells in the skin. F4/80/EMR1 undergoes extensive N-linked glycosylation as well as some O-linked glycosylation. The function of F4/80/EMR1 is unclear, but it is speculated to be involved in macrophage adhesion events, cell migration, or as a G protein-coupled signaling component of macrophages.

REFERENCES

1. Baud, V., et al. 1995. EMR1, an unusual member in the family of hormone receptors with seven transmembrane segments. Genomics 26: 334-344.
2. Haidl, I.D., et al. 1996. The macrophage cell surface glycoprotein F4/80 is a highly glycosylated proteoglycan. Eur. J. Immunol. 26: 1139-1146.

CHROMOSOMAL LOCATION

Genetic locus: Emr1 (mouse) mapping to 17 D.

SOURCE

F4/80 (A-19) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of F4/80 of mouse 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-515648 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

F4/80 (A-19) is recommended for detection of F4/80 of mouse and rat origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg 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 F4/80 siRNA (m): sc-42865, F4/80 shRNA Plasmid (m): sc-42865-SH and F4/80 shRNA (m) Lentiviral Particles: sc-42865-V.

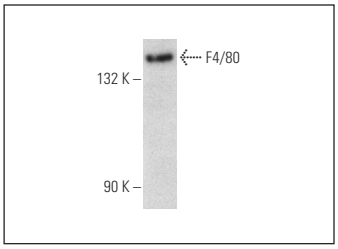
Molecular Weight of F4/80: 160 kDa.

Positive Controls: WEHI-3 whole cell lysate: sc-3815 or M1 whole cell lysate: sc-364782.

STORAGE

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

DATA



F4/80 (A-19): sc-26642. Western blot analysis of F4/80 expression in M1 whole cell lysate.

SELECT PRODUCT CITATIONS

1. Roland, C.L., et al. 2009. Cytokine levels correlate with immune cell infiltration after anti-VEGF therapy in preclinical mouse models of breast cancer. PLoS ONE 4: e7669.
2. Gysemans, C., et al. 2009. Interferon regulatory factor-1 is a key transcription factor in murine β cells under immune attack. Diabetologia 52: 2374-2384.
3. Roland, C.L., et al. 2009. Inhibition of vascular endothelial growth factor reduces angiogenesis and modulates immune cell infiltration of orthotopic breast cancer xenografts. Mol. Cancer Ther. 8: 1761-1771.
4. Saban, M.R., et al. 2010. Neuropilin-VEGF signaling pathway acts as a key modulator of vascular, lymphatic, and inflammatory cell responses of the bladder to intravesical BCG treatment. Am. J. Physiol. Renal Physiol. 299: F1245-F1256.
5. Katoh, H., et al. 2010. COX-2 and prostaglandin EP3/EP4 signaling regulate the tumor stromal proangiogenic microenvironment via CXCL12-CXCR4 chemokine systems. Am. J. Pathol. 176: 1469-1483.
6. Kruger, M.J. and Smith, C. 2012. Postcontusion polyphenol treatment alters inflammation and muscle regeneration. Med. Sci. Sports Exerc. 44: 872-880.
7. Yang, L., et al. 2015. Establishment of a simple method for separation culture and identification of mouse peripheral blood monocyte/macrophage. J. Cap. Med. University. 36: 610-613.

RESEARCH USE

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