

F4/80 (C-7): sc-377009

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 19p13.3. 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.

CHROMOSOMAL LOCATION

Genetic locus: ADGRE1 (human) mapping to 19p13.3; Adgre1 (mouse) mapping to 17 D.

SOURCE

F4/80 (C-7) is a mouse monoclonal antibody raised against amino acids 335-634 mapping within an extracellular domain of F4/80 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

F4/80 (C-7) is available conjugated to agarose (sc-377009 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-377009 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-377009 PE), fluorescein (sc-377009 FITC), Alexa Fluor® 488 (sc-377009 AF488), Alexa Fluor® 546 (sc-377009 AF546), Alexa Fluor® 594 (sc-377009 AF594) or Alexa Fluor® 647 (sc-377009 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-377009 AF680) or Alexa Fluor® 790 (sc-377009 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

F4/80 (C-7) is recommended for detection of EMR1 of human origin, F4/80 of mouse origin and the corresponding rat homolog by Western Blotting (starting dilution 1:100, 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), immunohistochemistry (including paraffin-embedded sections) (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 EMR1 siRNA (h): sc-72157, F4/80 siRNA (m): sc-42865, EMR1 shRNA Plasmid (h): sc-72157-SH, F4/80 shRNA Plasmid (m): sc-42865-SH, EMR1 shRNA (h) Lentiviral Particles: sc-72157-V and F4/80 shRNA (m) Lentiviral Particles: sc-42865-V.

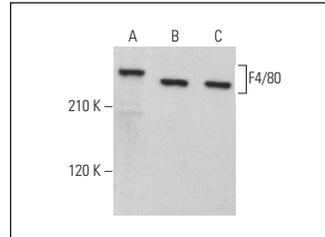
Molecular Weight of F4/80: 160 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

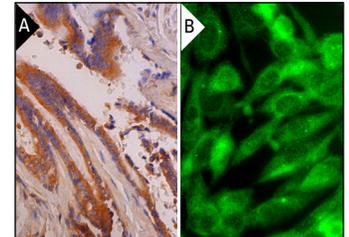
STORAGE

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

DATA



F4/80 (C-7): sc-377009. Western blot analysis of F4/80 expression in RAW 264.7 (A), K-562 (B) and HL-60 (C) whole cell lysates.



F4/80 (C-7): sc-377009. Immunoperoxidase staining of formalin fixed, paraffin-embedded human bronchus tissue showing cytoplasmic staining of respiratory epithelial cells (A). Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic localization (B).

SELECT PRODUCT CITATIONS

- Lu, H.J., et al. 2014. Ruscogenin ameliorates experimental nonalcoholic steatohepatitis via suppressing lipogenesis and inflammatory pathway. *Biomed Res. Int.* 2014: 652680.
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- Chang, C.J., et al. 2014. The ethanol extract of *Zingiber zerumbet* Smith attenuates non-alcoholic fatty liver disease in hamsters fed on high-fat diet. *Food Chem. Toxicol.* 65: 33-42.
- Payolla, T.B., et al. 2016. High-fat diet during pregnancy and lactation impairs the cholinergic anti-inflammatory pathway in the liver and white adipose tissue of mouse offspring. *Mol. Cell. Endocrinol.* 422: 192-202.
- Xu, W., et al. 2016. Dihydroartemisinin protects against alcoholic liver injury through alleviating hepatocyte steatosis in a farnesoid X receptor-dependent manner. *Toxicol. Appl. Pharmacol.* 315: 23-34.
- Kumar, G., et al. 2016. Hepatic radiofrequency ablation: markedly reduced systemic effects by modulating periablation inflammation via cyclooxygenase-2 inhibition. *Eur. Radiol.* 27: 1238-1247.
- Komegae, E.N., et al. 2017. Multiple functional therapeutic effects of TnP: A small stable synthetic peptide derived from fish venom in a mouse model of multiple sclerosis. *PLoS ONE* 12: e0171796.
- Seigel, G.M., et al. 2017. An immortalized microglial cell line (Mocha) derived from rat cochlea. *Mol. Cell. Neurosci.* 85: 202-210.
- Chen, X.W., et al. 2017. CYP4A in tumor-associated macrophages promotes pre-metastatic niche formation and metastasis. *Oncogene* 36: 5045-5057.

RESEARCH USE

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

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