



# SZABO SCANDIC

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## Produktinformation



Forschungsprodukte & Biochemikalien



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Diagnostik & molekulare Diagnostik



Laborgeräte & Service

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### Lieferung & Zahlungsart

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### Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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## F4/80 siRNA (m): sc-42865

### 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 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.
3. Mander, T.H., et al. 1996. Development of microglia and macrophages in the postnatal rat pituitary. *Cell Tissue Res.* 286: 347-355.
4. McKnight, A.J., et al. 1998. Chromosome mapping of the EMR1 gene. *Mamm. Genome* 8: 946.

### CHROMOSOMAL LOCATION

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

### PRODUCT

F4/80 siRNA (m) is a pool of 3 target-specific 19-25 nt siRNAs designed to knock down gene expression. Each vial contains 3.3 nmol of lyophilized siRNA, sufficient for a 10  $\mu$ M solution once resuspended using protocol below. Suitable for 50-100 transfections. Also see F4/80 shRNA Plasmid (m): sc-42865-SH and F4/80 shRNA (m) Lentiviral Particles: sc-42865-V as alternate gene silencing products.

For independent verification of F4/80 (m) gene silencing results, we also provide the individual siRNA duplex components. Each is available as 3.3 nmol of lyophilized siRNA. These include: sc-42865A, sc-42865B and sc-42865C.

### STORAGE AND RESUSPENSION

Store lyophilized siRNA duplex at -20° C with desiccant. Stable for at least one year from the date of shipment. Once resuspended, store at -20° C, avoid contact with RNAses and repeated freeze thaw cycles.

Resuspend lyophilized siRNA duplex in 330  $\mu$ l of the RNase-free water provided. Resuspension of the siRNA duplex in 330  $\mu$ l of RNase-free water makes a 10  $\mu$ M solution in a 10  $\mu$ M Tris-HCl, pH 8.0, 20 mM NaCl, 1 mM EDTA buffered solution.

### APPLICATIONS

F4/80 siRNA (m) is recommended for the inhibition of F4/80 expression in mouse cells.

### SUPPORT REAGENTS

For optimal siRNA transfection efficiency, Santa Cruz Biotechnology's siRNA Transfection Reagent: sc-29528 (0.3 ml), siRNA Transfection Medium: sc-36868 (20 ml) and siRNA Dilution Buffer: sc-29527 (1.5 ml) are recommended. Control siRNAs or Fluorescein Conjugated Control siRNAs are available as 10  $\mu$ M in 66  $\mu$ l. Each contain a scrambled sequence that will not lead to the specific degradation of any known cellular mRNA. Fluorescein Conjugated Control siRNAs include: sc-36869, sc-44239, sc-44240 and sc-44241. Control siRNAs include: sc-37007, sc-44230, sc-44231, sc-44232, sc-44233, sc-44234, sc-44235, sc-44236, sc-44237 and sc-44238.

### GENE EXPRESSION MONITORING

F4/80 (C-7): sc-377009 is recommended as a control antibody for monitoring of F4/80 gene expression knockdown by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) or immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500).

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG $\kappa$  BP-HRP: sc-516102 or m-IgG $\kappa$  BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use m-IgG $\kappa$  BP-FITC: sc-516140 or m-IgG $\kappa$  BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

### RT-PCR REAGENTS

Semi-quantitative RT-PCR may be performed to monitor F4/80 gene expression knockdown using RT-PCR Primer: F4/80 (m)-PR: sc-42865-PR (20  $\mu$ l, 551 bp). Annealing temperature for the primers should be 55-60° C and the extension temperature should be 68-72° C.

### SELECT PRODUCT CITATIONS

1. Kang, J.H., et al. 2017. F4/80 inhibits osteoclast differentiation via downregulation of nuclear factor of activated T cells, cytoplasmic 1. *Arch. Pharm. Res.* 40: 492-499.

### 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) for detailed protocols and support products.