

Siglec-E (F-7): sc-377477

BACKGROUND

Two families of mammalian lectin-like adhesion molecules, the selectins and the sialoadhesins, bind glycoconjugate ligands in a sialic acid-dependent manner. The sialic acid-binding immunoglobulin superfamily lectins, designated Siglecs or sialoadhesins, recognize sialylated ligands and play a key role in mediating sialic-acid dependent binding to cells. Siglec-E (sialic acid binding Ig-like lectin E), also known as Cd170, Siglec5, Siglec9, Siglecl1 or mSiglec-E, is a 467 amino acid murine protein that localizes to the membrane and contains one Ig-like V-type domain and two Ig-like C2-type domains. Expressed at high levels in heart, liver and spleen and found at lower levels in lung and kidney, Siglec-E exists as a disulfide-linked homodimer that acts as a cell adhesion molecule which mediates sialic acid-dependent cell binding and is thought to play a role in immune system function. Siglec-E is subject to post-translational phosphorylation which may influence its protein binding capabilities.

CHROMOSOMAL LOCATION

Genetic locus: Siglece (mouse) mapping to 7 B4.

SOURCE

Siglec-E (F-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 371-403 within a C-terminal cytoplasmic domain of Siglec-E of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-377477 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

Siglec-E (F-7) is recommended for detection of Siglec-E of mouse origin 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 Siglec-E siRNA (m): sc-153462, Siglec-E shRNA Plasmid (m): sc-153462-SH and Siglec-E shRNA (m) Lentiviral Particles: sc-153462-V.

Molecular Weight of Siglec-E dimer: 140 kDa.

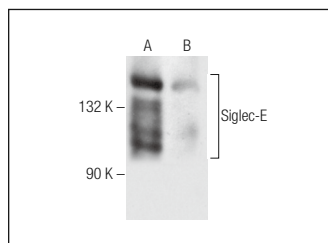
Molecular Weight of Siglec-E monomer: 70 kDa.

Positive Controls: mouse spleen extract: sc-2391, WEHI-3 cell lysate: sc-3815 or M1 whole cell lysate: sc-364782.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ 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) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohisto-mount: sc-45086, or Organo/Limonene Mount: sc-45087.

DATA



Siglec-E (F-7): sc-377477. Western blot analysis of Siglec-E expression in mouse spleen tissue extract (A) and P388D1 whole cell lysate (B).

SELECT PRODUCT CITATIONS

1. Mukherjee, K., et al. 2020. Sialic acid-Siglec-E interactions during *Pseudomonas aeruginosa* infection of macrophages interferes with phagosome maturation by altering intracellular calcium concentrations. *Front. Immunol.* 11: 332.
2. Karmakar, J. and Mandal, C. 2021. Interplay between sialic acids, Siglec-E, and Neu1 regulates MyD88- and TRIF-dependent pathways for TLR4-activation during *Leishmania donovani* infection. *Front. Immunol.* 12: 626110.

STORAGE

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

PROTOCOLS

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