SANTA CRUZ BIOTECHNOLOGY, INC.

MS4A7 (M-13): sc-168655

BACKGROUND

MS4A (membrane-spanning 4-domain family, subfamily A) is a large family of proteins that includes at least 26 members in mouse and humans. Flanked by amino- and carboxyl- cytoplasmic regions, MS4A family members contain four highly conserved transmembrane domains. CD20, the most well-known MS4A family member, is a B-cell-specific molecule that functions as a calcium-permeable cation channel and is known to accelerate the G_0 to G_1 progression induced by IGF-1. Several other MS4A family members are likely to be components of oligomeric cell surface complexes involved in signal transduction in diverse cell lineages. MS4A7 (membrane-spanning 4-domains subfamily A member 7), also known as CFFM4 (CD20/FC-ε-RI-β family member 4), 4SPAN2 (4-span transmembrane protein 2) and CD20L4 (CD20 antigen-like 4), is a 240 amino acid multi-pass membrane protein that may be involved in signal transduction due to the presence of multiple phosphorylation sites on its C-terminus.

REFERENCES

1. Ishibashi, K., et al. 2001. Identification of a new multigene four-transmembrane family (MS4A) related to CD20, HTm4 and β subunit of the high-affinity IgE receptor. Gene 264: 87-93.
2. Liang, Y., et al. 2001. Identification of a CD20-, FcεRIβ-, and HTm4-related gene family: sixteen new MS4A family members expressed in human and mouse. Genomics 72: 119-127.
3. Liang, Y., et al. 2001. Structural organization of the human MS4A gene cluster on Chromosome 11q12. Immunogenetics 53: 357-368.
4. Gingras, M.C., et al. 2001. CFFM4: a new member of the CD20/FcεRIβ family. Immunogenetics 53: 468-476.
5. Online Mendelian Inheritance in Man, OMIM™. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606502. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
6. Ota, T., et al. 2004. Complete sequencing and characterization of 21,243 full-length human cDNAs. Nat. Genet. 36: 40-45.
7. Brink, T.C., et al. 2008. The origins of human embryonic stem cells: a biological conundrum. Cells Tissues Organs 188: 9-22.

CHROMOSOMAL LOCATION

Genetic locus: Ms4a7 (mouse) mapping to 19 A.

SOURCE

MS4A7 (M-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the C-terminus of MS4A7 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-168655 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MS4A7 (M-13) is recommended for detection of MS4A7 of mouse 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); non cross-reactive with other MS4A family members.

Suitable for use as control antibody for MS4A7 siRNA (m): sc-149656, MS4A7 shRNA Plasmid (m): sc-149656-SH and MS4A7 shRNA (m) Lentiviral Particles: sc-149656-V.

Molecular Weight of MS4A7: 26 kDa.

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 or our catalog for detailed protocols and support products.