

IGSF11 (H-9): sc-393816

BACKGROUND

IGSF11 (immunoglobulin superfamily, member 11) is also known as BTIGSF (brain and testis-specific immunoglobulin superfamily protein) or VSIG3 (V-set and immunoglobulin domain-containing protein 3) and is a 431 amino acid protein that is expressed as three isoforms. IGSF11 is highly expressed in testis and ovary and is also expressed in brain, kidney and skeletal muscle, localized to the cellular membrane as a single-pass membrane protein. IGSF11 is an immunoglobulin with V-type and C2-type domains that function in molecular recognition. When IGSF11 is in the *trans* position, it plays an important role in cell-cell adhesion via both homophilic and heterophilic interactions with other molecules. These cell-cell interactions are also thought to be important for neuronal cell interactions, such as neuron-neuron or neuron-glia interactions, which are important for the development and function of the central nervous system. In addition, IGSF11 might also be involved in interactions between Sertoli cells and spermatocytes, which are important associations during spermatogenesis. The IGSF11 gene is commonly upregulated in gastric cancer and IGSF11 is highly expressed in many types of human tumors, indicating that it may be useful as a target for immunotherapy.

REFERENCES

1. Suzu, S., et al. 2002. Molecular cloning of a novel immunoglobulin superfamily gene preferentially expressed by brain and testis. *Biochem. Biophys. Res. Commun.* 296: 1215-1221.
2. Katoh, M. and Katoh, M. 2003. IGSF11 gene, frequently up-regulated in intestinal-type gastric cancer, encodes adhesion molecule homologous to CXADR, FLJ22415 and ESAM. *Int. J. Oncol.* 23: 525-531.
3. Raschperger, E., et al. 2004. CLMP, a novel member of the CTX family and a new component of epithelial tight junctions. *J. Biol. Chem.* 279: 796-804.
4. Watanabe, T., et al. 2005. Identification of immunoglobulin superfamily 11 (IGSF11) as a novel target for cancer immunotherapy of gastrointestinal and hepatocellular carcinomas. *Cancer Sci.* 96: 498-506.
5. Harada, H., et al. 2005. BT-IgSF, a novel immunoglobulin superfamily protein, functions as a cell adhesion molecule. *J. Cell. Physiol.* 204: 919-926.

CHROMOSOMAL LOCATION

Genetic locus: IGSF11 (human) mapping to 3q13.32; *lgf11* (mouse) mapping to 16 B4.

SOURCE

IGSF11 (H-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 21-38 near the N-terminus of IGSF11 of human origin.

PRODUCT

Each vial contains 200 µg IgG₃ 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-393816 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

IGSF11 (H-9) is recommended for detection of IGSF11 of mouse, rat and human 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for IGSF11 siRNA (h): sc-77879, IGSF11 siRNA (m): sc-146187, IGSF11 shRNA Plasmid (h): sc-77879-SH, IGSF11 shRNA Plasmid (m): sc-146187-SH, IGSF11 shRNA (h) Lentiviral Particles: sc-77879-V and IGSF11 shRNA (m) Lentiviral Particles: sc-146187-V.

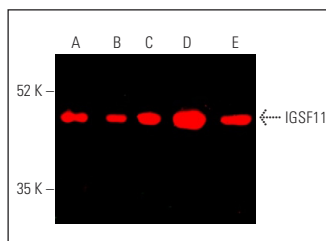
Molecular Weight of IGSF11: 44 kDa.

Positive Controls: U266 whole cell lysate: sc-364800, Jurkat whole cell lysate: sc-2204 or 3T3-L1 cell lysate: sc-2243.

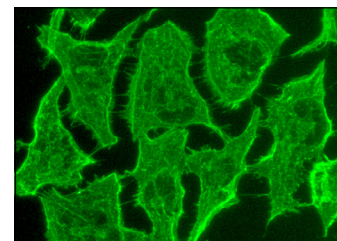
RECOMMENDED SUPPORT REAGENTS

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 A/G PLUS-Agarose: sc-2003 (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.

DATA



IGSF11 (H-9): sc-393816. Near-Infrared western blot analysis of IGSF11 expression in 3T3-L1 (A), Y79 (B), U266 (C), KNRK (D) and Jurkat (E) whole cell lysates. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG₃ BP-CFL 790: sc-533678.



IGSF11 (H-9): sc-393816. Immunofluorescence staining of methanol-fixed HeLa cells showing membrane localization.

SELECT PRODUCT CITATIONS

1. Kim, H., et al. 2020. IGSF11 regulates osteoclast differentiation through association with the scaffold protein PSD-95. *Bone Res.* 8: 5.

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.