

Embigin (43G7): sc-130919

BACKGROUND

Embigin, also known as Emb or teratocarcinoma glycoprotein Gp-70 (Gp70), is a 327 amino acid single-pass type I membrane protein belonging to the immunoglobulin superfamily (IgSF) class of cell adhesion molecules. Embigin is involved in cell growth and development by regulating interactions between cells and the extracellular matrix, and plays a role in maintaining homeostasis of normal adult tissues. Found in various adult tissues including brain, heart, liver and lung, Embigin is also expressed during regression of prostate and mammary gland. Embigin is involved in the modulation of neuromuscular junction formation and plasticity, and is encoded by a gene mapping to human chromosome 5q11.1. An Embigin pseudogene exists on chromosome 1.

REFERENCES

- Ozawa, M., Huang, R.P., Furukawa, T. and Muramatsu, T. 1988. A teratocarcinoma glycoprotein carrying a developmentally regulated carbohydrate marker is a member of the immunoglobulin gene superfamily. *J. Biol. Chem.* 263: 3059-3062.
- Huang, R.P., Ozawa, M., Kadomatsu, K. and Muramatsu, T. 1993. Embigin, a member of the immunoglobulin superfamily expressed in embryonic cells, enhances cell-substratum adhesion. *Dev. Biol.* 155: 307-314.
- Ray, M.E., Su, Y.A., Meltzer, P.S. and Trent, J.M. 1996. Isolation and characterization of genes associated with chromosome-6 mediated tumor suppression in human malignant melanoma. *Oncogene* 12: 2527-2533.
- Guenette, R.S., Sridhar, S., Herley, M., Mooibroek, M., Wong, P. and Tenniswood, M. 1997. Embigin, a developmentally expressed member of the immunoglobulin super family, is also expressed during regression of prostate and mammary gland. *Dev. Genet.* 21: 268-278.
- Fan, Q.W., Kadomatsu, K., Uchimura, K. and Muramatsu, T. 1998. Embigin/basigin subgroup of the immunoglobulin superfamily: different modes of expression during mouse embryogenesis and correlated expression with carbohydrate antigenic markers. *Dev. Growth Differ.* 40: 277-286.
- Tachikui, H., Kurosawa, N., Kadomatsu, K. and Muramatsu, T. 1999. Genomic organization and promoter activity of Embigin, a member of the immunoglobulin superfamily. *Gene* 240: 325-332.
- Lain, E., Carnejac, S., Escher, P., Wilson, M.C., Lømo, T., Gajendran, N. and Brenner, H.R. 2009. A novel role for Embigin to promote sprouting of motor nerve terminals at the neuromuscular junction. *J. Biol. Chem.* 284: 8930-8939.
- Wollscheid, B., Bausch-Fluck, D., Henderson, C., O'Brien, R., Bibbel, M., Schiess, R., Aebbersold, R. and Watts, J.D. 2009. Mass-spectrometric identification and relative quantification of N-linked cell surface glycoproteins. *Nat. Biotechnol.* 27: 378-386.

CHROMOSOMAL LOCATION

Genetic locus: Emb (mouse) mapping to 13 D2.3.

SOURCE

Embigin (43G7) is a rat monoclonal antibody raised against CHO cells transfected with Embigin of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Embigin (43G7) is available conjugated to agarose (sc-130919 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-130919 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-130919 PE), fluorescein (sc-130919 FITC), Alexa Fluor® 488 (sc-130919 AF488), Alexa Fluor® 546 (sc-130919 AF546), Alexa Fluor® 594 (sc-130919 AF594) or Alexa Fluor® 647 (sc-130919 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-130919 AF680) or Alexa Fluor® 790 (sc-130919 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

APPLICATIONS

Embigin (43G7) is recommended for detection of Embigin of mouse origin by immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and flow cytometry (1 µg per 1 x 10⁶ cells).

Suitable for use as control antibody for Embigin siRNA (m): sc-144637, Embigin shRNA Plasmid (m): sc-144637-SH and Embigin shRNA (m) Lenti-viral Particles: sc-144637-V.

Molecular Weight of Embigin: 37 kDa.

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 for detailed protocols and support products.