



MCF2L2 (T-17): sc-103038

BACKGROUND

The Ras superfamily of GTPases, which can be subdivided into the Ras, Rho/Rac, Sar, Rab, ARF and Ran subfamilies, controls multiple aspects of cell function, including cytoskeletal rearrangement, nuclear signaling and cell growth. The Ras superfamily of GTPases function as regulated switches that toggle between a biologically active GTP-bound and an inactive GDP-bound form. This activation is catalyzed by guanine nucleotide exchange factors (GEFs). MCF2L2 (MCF.2 cell line derived transforming sequence-like 2), also known as DRG, is a 1,114 amino acid protein that contains one spectrin repeat, one PH domain, one DH domain and one CRAL-TRIO domain. Expressed at high levels in brain and also present in testis and pancreas, MCF2L2 is thought to function as a GEF, catalyzing the activation of target GTPases. Variations in the gene encoding MCF2L2 may be associated with an increased susceptibility to type 2 diabetes. Multiple isoforms of MCF2L2 exist due to alternative splicing events.

REFERENCES

1. Nagase, T., Ishikawa, K., Suyama, M., Kikuno, R., Hirose, M., Miyajima, N., Tanaka, A., Kotani, H., Nomura, N. and Ohara, O. 1998. Prediction of the coding sequences of unidentified human genes. XII. The complete sequences of 100 new cDNA clones from brain which code for large proteins *in vitro*. *DNA Res.* 5: 355-364.
2. Schmidt, A. and Hall, A. 2002. Guanine nucleotide exchange factors for Rho GTPases: turning on the switch. *Genes Dev.* 16: 1587-1609.
3. Erickson, J.W. and Cerione, R.A. 2004. Structural elements, mechanism, and evolutionary convergence of Rho protein-guanine nucleotide exchange factor complexes. *Biochemistry* 43: 837-842.
4. Ishimaru, S. and Hama, C. 2004. Guanine nucleotide exchange factors for Rho family GTPases: specific mediators for a variety of signals. *Tanpakushitsu Kakusan Koso* 49: 324-330.
5. Das, S.K. and Elbein, S.C. 2007. The search for type 2 diabetes susceptibility loci: the chromosome 1q story. *Curr. Diab. Rep.* 7: 154-164.
6. Takeuchi, F., Ochiai, Y., Serizawa, M., Yanai, K., Kuzuya, N., Kajio, H., Honjo, S., Takeda, N., Kaburagi, Y., Yasuda, K., Shirasawa, S., Sasazuki, T. and Kato, N. 2008. Search for type 2 diabetes susceptibility genes on chromosomes 1q, 3q and 12q. *J. Hum. Genet.* 53: 314-324.

CHROMOSOMAL LOCATION

Genetic locus: MCF2L2 (human) mapping to 3q27.1.

SOURCE

MCF2L2 (T-17) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within an internal region of MCF2L2 of human origin.

PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103038 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

MCF2L2 (T-17) is recommended for detection of MCF2L2 of human origin by Western Blotting (starting dilution 1:100, dilution range 1:50-1:500), immunofluorescence (starting dilution 1:25, dilution range 1:25-1:250) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for MCF2L2 siRNA (h): sc-78088, MCF2L2 shRNA Plasmid (h): sc-78088-SH and MCF2L2 shRNA (h) Lentiviral Particles: sc-78088-V.

Molecular Weight of MCF2L2: 127 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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 goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (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.