

SCFD1 (C-15): sc-160773

BACKGROUND

SCFD1 (sec1 family domain containing 1) is a 642 amino acid protein that belongs to the STXBP/unc-18/SEC1 family. Phosphorylated upon DNA damage, probably by Atm or ATR, SCFD1 is involved in vesicular transport between the endoplasmic reticulum (ER) and the Golgi. The SCFD1 protein plays a role in SNARE-pin assembly and Golgi to ER retrograde transport via its interaction with COG4. The SCFD1 protein also binds Syntaxin 5. The SCFD1 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, mosquito, *Drosophila*, *C. elegans*, *S. pombe*, *S. cerevisiae*, *K. lactis*, *E. gossypii*, *M. grisea*, *N. crassa*, *A. thaliana* and rice, and maps to human chromosome 14q12. Deletion of a region of chromosome 14 that contains BF-1, PKC μ , SCFD1, Cochlin and SG2NA genes, is responsible for a condition resulting in severe mental retardation, epilepsy, microcephaly and Rett-like features.

REFERENCES

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- Shorter, J., et al. 2002. Sequential tethering of Golgins and catalysis of SNAREpin assembly by the vesicle-tethering protein p115. *J. Cell Biol.* 157: 45-62.
- Dulubova, I., et al. 2003. Convergence and divergence in the mechanism of SNARE binding by Sec1/Munc18-like proteins. *Proc. Natl. Acad. Sci. USA* 100: 32-37.
- Hirose, H., et al. 2004. Implication of ZW10 in membrane trafficking between the endoplasmic reticulum and Golgi. *EMBO J.* 23: 1267-1278.
- Williams, A.L., et al. 2004. rsl1 binding to syntaxin 5 is required for endoplasmic reticulum-to-Golgi transport but does not promote SNARE motif accessibility. *Mol. Biol. Cell* 15: 162-175.
- Laufman, O., et al. 2009. Direct interaction between the COG complex and the SM protein, Sly1, is required for Golgi SNARE pairing. *EMBO J.* 28: 2006-2017.

CHROMOSOMAL LOCATION

Genetic locus: SCFD1 (human) mapping to 14q12; Scfd1 (mouse) mapping to 12 C1.

SOURCE

SCFD1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of SCFD1 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160773 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

RESEARCH USE

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

APPLICATIONS

SCFD1 (C-15) is recommended for detection of SCFD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with SCFD2.

SCFD1 (C-15) is also recommended for detection of SCFD1 in additional species, including equine, canine, bovine and avian.

Suitable for use as control antibody for SCFD1 siRNA (h): sc-92147, SCFD1 siRNA (m): sc-153251, SCFD1 shRNA Plasmid (h): sc-92147-SH, SCFD1 shRNA Plasmid (m): sc-153251-SH, SCFD1 shRNA (h) Lentiviral Particles: sc-92147-V and SCFD1 shRNA (m) Lentiviral Particles: sc-153251-V.

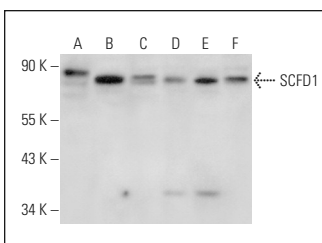
Molecular Weight of SCFD1: 72 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or MCF7 whole cell lysate: sc-2206.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



SCFD1 (C-15): sc-160773. Western blot analysis of SCFD1 expression in K-562 (A), Jurkat (B), PC-12 (C), MCF7 (D), HEK293 (E) and NIH/3T3 (F) whole cell lysates.

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 or our catalog for detailed protocols and support products.