# LDLRAD4 (D-13): sc-84716



The Power to Question

#### **BACKGROUND**

C18orf1, also known as LDLRAD4, is a 306 amino acid single-pass membrane protein that contains one LDL-receptor class A domain and belongs to the PMEPA1 family. C18orf1 exists as five alternatively spliced isoforms that display selective expression and are encoded by a gene that maps to human chromosome 18, which houses over 300 protein-coding genes and contains nearly 76 million bases. There are a variety of diseases associated with defects in chromosome 18-localized genes, some of which include trisomy 18 (also known as Edwards syndrome), Niemann-Pick disease, hereditary hemorrhagic telangiectasia, erythropoietic protoporphyria and follicular lymphomas.

### **REFERENCES**

- Yoshikawa, T., Sanders, A.R., Esterling, L.E., Overhauser, J., Garnes, J.A., Lennon, G., Grewal, R. and Detera-Wadleigh, S.D. 1997. Isolation of chromosome 18-specific brain transcripts as positional candidates for bipolar disorder. Am. J. Med. Genet. 74: 140-149.
- Esterling, L.E., Cox-Matise, T., Sanders, A.R., Yoshikawa, T., Overhauser, J., Gershon, E.S., Moskowitz, M.T. and Detera-Wadleigh, S.D. 1997. An integrated physical map of 18p11.2: a susceptibility region for bipolar disorder. Mol. Psychiatry 2: 501-504.
- Yoshikawa, T., Sanders, A.R., Esterling, L.E. and Detera-Wadleigh, S.D. 1998. Multiple transcriptional variants and RNA editing in C18orf1, a novel gene with LDLRA and transmembrane domains on 18p11.2. Genomics 47: 246-257.
- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 606571. World Wide Web URL: http://www.ncbi.nlm.nih.gov/omim/
- Petek, E., Pertl, B., Tschernigg, M., Bauer, M., Mayr, J., Wagner, K. and Kroisel, P.M. 2003. Characterisation of a 19-year-old "long-term survivor" with Edwards syndrome. Genet. Couns. 14: 239-244.
- Grosso, S., Pucci, L., Di Bartolo, R.M., Gobbi, G., Bartalini, G., Anichini, C., Scarinci, R., Balestri, M., Farnetani, M.A., Cioni, M., Morgese, G. and Balestri, P. 2005. Chromosome 18 aberrations and epilepsy: a review. Am. J. Med. Genet. A 134: 88-94.
- 7. Nusbaum, C., Zody, M.C., Borowsky, M.L., Kamal, M., Kodira, C.D., Taylor, T.D., Whittaker, C.A., Chang, J.L., Cuomo, C.A., Dewar, K., FitzGerald, M.G., Yang, X., Abouelleil, A., Allen, N.R., Anderson, S., Bloom, T., Bugalter, B., et al. 2005. DNA sequence and analysis of human chromosome 18. Nature 437: 551-555.
- 8. Pickard, B.S., Malloy, M.P., Clark, L., Lehellard, S., Ewald, H.L., Mors, O., Porteous, D.J., Blackwood, D.H. and Muir, W.J. 2005. Candidate psychiatric illness genes identified in patients with pericentric inversions of chromosome 18. Psychiatr. Genet. 15: 37-44.

# **CHROMOSOMAL LOCATION**

Genetic locus: LDLRAD4 (human) mapping to 18p11.2; D18Ertd653e (mouse) mapping to 18 E2.

#### **SOURCE**

LDLRAD4 (D-13) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping within a cytoplasmic domain of LDLRAD4 of human origin.

#### **PRODUCT**

Each vial contains 100  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84716 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **APPLICATIONS**

LDLRAD4 (D-13) is recommended for detection of LDLRAD4 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ 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).

LDLRAD4 (D-13) is also recommended for detection of LDLRAD4 in additional species, including avian.

Suitable for use as control antibody for LDLRAD4 siRNA (h): sc-72671, LDLRAD4 siRNA (m): sc-141838, LDLRAD4 shRNA Plasmid (h): sc-72671-SH, LDLRAD4 shRNA Plasmid (m): sc-141838-SH, LDLRAD4 shRNA (h) Lentiviral Particles: sc-72671-V and LDLRAD4 shRNA (m) Lentiviral Particles: sc-141838-V.

Molecular Weight of LDLRAD4: 34 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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

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