

CUZD1 (A-14): sc-162718

BACKGROUND

CUZD1 (CUB and zona pellucida-like domains 1), also known as ERG-1 (estrogen regulated gene 1) or UO-44, is a 607 amino acid single-pass type I membrane protein that contains 2 CUB domains and a ZP (zona-pellucida) domain. Expressed in pancreas and epithelium of ovary, CUZD1 is found at high levels in ovarian tumors where it is thought to inhibit cell attachment and proliferation. CUZD1 is suggested to play a role in cell motility, cell-cell interactions and/or interactions with the extracellular matrices. Existing as three alternatively spliced isoforms, CUZD1 is encoded by a gene located on human chromosome 10. Making up 4.5% of the human genome, chromosome 10 encodes roughly 800 genes including PTEN, a tumor suppressor gene that has been linked to the development of Cowden syndrome. The chromosome 10 encoded gene ERCC6 is important for DNA repair and is linked to Cockayne syndrome which is characterized by extreme photosensitivity and premature aging.

REFERENCES

1. Deloukas, P., French, L., Meitinger, T. and Moschonas, N.K. 2000. Report of the third international workshop on human chromosome 10 mapping and sequencing 1999. *Cytogenet. Cell Genet.* 90: 1-12.
2. Leong, C.T., Ng, C.Y., Ong, C.K., Ng, C.P., Ma, Z.S., Nguyen, T.H., Tay, S.K. and Huynh, H. 2004. Molecular cloning, characterization and isolation of novel spliced variants of the human ortholog of a rat estrogen-regulated membrane-associated protein, UO-44. *Oncogene* 23: 5707-5718.
3. Yamazaki, K., Adachi, T., Sato, K., Yanagisawa, Y., Fukata, H., Seki, N., Mori, C. and Komiyama, M. 2006. Identification and characterization of novel and unknown mouse epididymis-specific genes by complementary DNA microarray technology. *Biol. Reprod.* 75: 462-468.
4. Teresi, R.E., Zbuk, K.M., Pezzolesi, M.G., Waite, K.A. and Eng, C. 2007. Cowden syndrome-affected patients with PTEN promoter mutations demonstrate abnormal protein translation. *Am. J. Hum. Genet.* 81: 756-767.
5. Leong, C.T., Ong, C.K., Tay, S.K. and Huynh, H. 2007. Silencing expression of UO-44 (CUZD1) using small interfering RNA sensitizes human ovarian cancer cells to cisplatin *in vitro*. *Oncogene* 26: 870-880.
6. Brink, T.C., Sudheer, S., Janke, D., Jagodzinska, J., Jung, M. and Adjaye, J. 2008. The origins of human embryonic stem cells: a biological conundrum. *Cells Tissues Organs* 188: 9-22.
7. Yin, Y. and Shen, W.H. 2008. PTEN: a new guardian of the genome. *Oncogene* 27: 5443-5453.

CHROMOSOMAL LOCATION

Genetic locus: CUZD1 (human) mapping to 10q26.13; Cuzd1 (mouse) mapping to 7 F3.

SOURCE

CUZD1 (A-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an extracellular domain of CUZD1 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-162718 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CUZD1 (A-14) is recommended for detection of CUZD1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

CUZD1 (A-14) is also recommended for detection of CUZD1 in additional species, including canine.

Suitable for use as control antibody for CUZD1 siRNA (h): sc-90351, CUZD1 siRNA (m): sc-142638, CUZD1 shRNA Plasmid (h): sc-90351-SH, CUZD1 shRNA Plasmid (m): sc-142638-SH, CUZD1 shRNA (h) Lentiviral Particles: sc-90351-V and CUZD1 shRNA (m) Lentiviral Particles: sc-142638-V.

Molecular Weight of CUZD1: 68 kDa.

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) 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.

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.



Try **CUZD1 (E-10): sc-514578**, our highly recommended monoclonal alternative to CUZD1 (A-14).