

EXOD1 (C-15): sc-164285

BACKGROUND

EXOD1 (exonuclease domain-containing protein 1), also known as ERI2 (ERI1 exoribonuclease 2), is a 691 amino acid protein that contains one exonuclease domain, which catalyzes the hydrolysis of unpaired or mismatched nucleotides. EXOD1 activity is dependent on the binding of two magnesium ions per subunit. There are four isoforms of EXOD1 that are produced as a result of alternative splicing events. The gene encoding EXOD1 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The GAN gene is located on chromosome 16 and, with mutation, may lead to giant axonal neuropathy, a nervous system disorder characterized by increasing malfunction with growth. The rare disorder Rubinstein-Taybi syndrome is also associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Koonin, E.V. 1997. A conserved ancient domain joins the growing superfamily of 3'-5' exonucleases. *Curr. Biol.* 7: R604-R606.
2. Ceska, T.A. and Sayers, J.R. 1998. Structure-specific DNA cleavage by 5' nucleases. *Trends Biochem. Sci.* 23: 331-336.
3. Gilbert, F. 1999. Disease genes and chromosomes: disease maps of the human genome. *Chromosome 16. Genet. Test.* 3: 243-254.
4. Martin, J., Han, C., Gordon, L.A., Terry, A., Prabhakar, S., She, X., Xie, G., Hellsten, U., Chan, Y.M., Altherr, M., Couronne, O., Aerts, A., Bajorek, E., Black, S., Blumer, H., Branscomb, E., et al. 2004. The sequence and analysis of duplication-rich human chromosome 16. *Nature* 432: 988-994.
5. Kupsco, J.M., Wu, M.J., Marzluff, W.F., Thapar, R. and Duronio, R.J. 2006. Genetic and biochemical characterization of *Drosophila* Snipper: A promiscuous member of the metazoan 3'hExo/ERI-1 family of 3' to 5' exonucleases. *RNA* 12: 2103-2117.
6. Zhang, L.P. and Zou, L.P. 2009. Clinical and genetic studies in a Chinese family with giant axonal neuropathy. *J. Child Neurol.* 24: 1552-1556.

CHROMOSOMAL LOCATION

Genetic locus: ERI2 (human) mapping to 16p12.3; Eri2 (mouse) mapping to 7 F2.

SOURCE

EXOD1 (C-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of EXOD1 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-164285 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

EXOD1 (C-15) is recommended for detection of EXOD1 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).

Suitable for use as control antibody for EXOD1 siRNA (h): sc-93002, EXOD1 siRNA (m): sc-144973, EXOD1 shRNA Plasmid (h): sc-93002-SH, EXOD1 shRNA Plasmid (m): sc-144973-SH, EXOD1 shRNA (h) Lentiviral Particles: sc-93002-V and EXOD1 shRNA (m) Lentiviral Particles: sc-144973-V.

Molecular Weight of EXOD1 isoforms 1/2/3/4: 78/67/32/38 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204.

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.

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.