

ZUD (C-12): sc-163562

BACKGROUND

Proteins containing the death domain (DD) are involved in a wide range of cellular processes, and play an important role in apoptotic and inflammatory processes. ZUD (ZU5 and death domain-containing protein), also known as UNC5CL (protein unc-5 homolog C-like), is a 518 amino acid single-pass type III membrane protein that belongs to the unc-5 family. Containing a death domain and a ZU5 domain, ZUD plays a role in the inhibition of NFκB-dependent transcription by inhibiting the binding of NFκB to its target, interacting specifically with NFκB subunits p65 and p50. The gene encoding ZUD maps to human chromosome 6, which contains 170 million base pairs and comprises nearly 6% of the human genome. Deletion of a portion of the q arm of chromosome 6 is associated with early onset intestinal cancer, suggesting the presence of a cancer susceptibility locus. Additionally, porphyria cutanea tarda, Parkinson's disease, Stickler syndrome and a susceptibility to bipolar disorder are all associated with genes that map to chromosome 6.

REFERENCES

1. Brunner, H.G., et al. 1994. A Stickler syndrome gene is linked to chromosome 6 near the COL11A2 gene. *Hum. Mol. Genet.* 3: 1561-1564.
2. Cesari, R., et al. 2003. Parkin, a gene implicated in autosomal recessive juvenile parkinsonism, is a candidate tumor suppressor gene on chromosome 6q25-q27. *Proc. Natl. Acad. Sci. USA* 100: 5956-5961.
3. Zhang, J., et al. 2004. Identification of a ZU5 and death domain-containing inhibitor of NFκB. *J. Biol. Chem.* 279: 17819-17825.
4. Park, H.H., et al. 2007. The death domain superfamily in intracellular signaling of apoptosis and inflammation. *Annu. Rev. Immunol.* 25: 561-586.
5. Bläker, H., et al. 2008. Recurrent deletions at 6q in early age of onset non-HNPCC- and non-FAP-associated intestinal carcinomas. Evidence for a novel cancer susceptibility locus at 6q14-q22. *Genes Chromosomes Cancer* 47: 159-164.
6. Fan, J., et al. 2010. Linkage disequilibrium mapping of the chromosome 6q21-22.31 bipolar I disorder susceptibility locus. *Am. J. Med. Genet. B Neuropsychiatr. Genet.* 153B: 29-37.
7. Jalil, S., et al. 2010. Associations among behavior-related susceptibility factors in porphyria cutanea tarda. *Clin. Gastroenterol. Hepatol.* 8: 297-302.
8. Lü, D., et al. 2010. Prokaryotic expression, purification and preparation of polyclonal antibody for human UNC5CL. *Xi Bao Yu Fen Zi Mian Yi Xue Za Zhi* 26: 242-245.
9. Heinz, L.X., et al. 2011. The death domain-containing protein Unc5CL is a novel MyD88-independent activator of the pro-inflammatory IRAK signaling cascade. *Cell Death Differ.* 19: 722-731.

CHROMOSOMAL LOCATION

Genetic locus: UNC5CL (human) mapping to 6p21.1.

SOURCE

ZUD (C-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within a C-terminal cytoplasmic domain of ZUD 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-163562 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ZUD (C-12) is recommended for detection of ZUD of 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); non cross-reactive with other UNC5 family members.

Suitable for use as control antibody for ZUD siRNA (h): sc-95528, ZUD shRNA Plasmid (h): sc-95528-SH and ZUD shRNA (h) Lentiviral Particles: sc-95528-V.

Molecular Weight of ZUD: 58 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.