SANTA CRUZ BIOTECHNOLOGY, INC.

Dim2 (G-17): sc-160286

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

The Dim protein family consists of two classes, Dim1 and Dim2, which share a common thioredoxin-like fold, but most likely function in different biological pathways. Dim2, also known as TXNL4B (thioredoxin-like 4B), or DLP, is a 149 amino acid nuclear protein that exists as a homodimer and plays an essential role in pre-mRNA splicing. Evolutionarily related and sharing 38% sequence identity with Dim1, Dim2 is required for S/G(2) transition during the cell cycle and is able to bind the PRP6 (U5-102K) subunit of the spliceosome. The gene encoding Dim2 maps to human chromosome 16, which encodes over 900 genes and comprises nearly 3% of the human genome. The rare disorder Rubinstein-Taybi syndrome is associated with chromosome 16, as is Crohn's disease, which is a gastrointestinal inflammatory condition.

REFERENCES

1. Baraitser, M. and Preece, M.A. 1983. The Rubinstein-Taybi syndrome: occurrence in two sets of identical twins. Clin. Genet. 23: 318-320.
2. Zhang, Y.Z., et al. 1999. The evolutionarily conserved Dim1 protein defines a novel branch of the thioredoxin fold superfamily. Physiol. Genomics 1: 109-118.
3. Mathew, C.G. and Lewis, C.M. 2004. Genetics of inflammatory bowel disease: progress and prospects. Hum. Mol. Genet. 131: R161-R168.
4. Sun, X., et al. 2004. DLP, a novel Dim1 family protein implicated in pre-mRNA splicing and cell cycle progression. J. Biol. Chem. 279: 32839-32847.
5. Jin, T., et al. 2005. Over-production, purification, crystallization and preliminary X-ray diffraction studies of the human spliceosomal protein TXNL4B. Acta Crystallogr. Sect. F Struct. Biol. Cryst. Commun. 61: 282-284.
6. Simeoni, F., et al. 2005. Biochemical characterization and crystal structure of a Dim1 family associated protein: Dim2. Biochemistry 44: 11997-12008.
7. Simeoni, F. and Divita, G. 2007. The Dim protein family: from structure to splicing. Cell. Mol. Life Sci. 64: 2079-2089.

CHROMOSOMAL LOCATION

Genetic locus: TXNL4B (human) mapping to 16q22.2; Txnl4b (mouse) mapping to 8 D3.

SOURCE

Dim2 (G-17) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of Dim2 of human origin.

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.

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-160286 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

Dim2 (G-17) is recommended for detection of Dim2 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); non cross-reactive with Dim1.

Dim2 (G-17) is also recommended for detection of Dim2 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for Dim2 siRNA (h): sc-93322, Dim2 siRNA (m): sc-143040, Dim2 shRNA Plasmid (h): sc-93322-SH, Dim2 shRNA Plasmid (m): sc-143040-SH, Dim2 shRNA (h) Lentiviral Particles: sc-93322-V and Dim2 shRNA (m) Lentiviral Particles: sc-143040-V.

Molecular Weight of Dim2: 17 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.

SELECT PRODUCT CITATIONS

1. Hsiang, C.Y., et al. 2013. Toona sinensis and its major bioactive compound gallic acid inhibit LPS-induced inflammation in nuclear factor-κB transgenic mice as evaluated by *in vivo* bioluminescence imaging. Food Chem. 136: 426-434.

RESEARCH USE

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