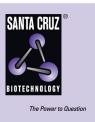
# SANTA CRUZ BIOTECHNOLOGY, INC.

# Dim2 (G-17): sc-160286



# 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.
- 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.
- 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.
- 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, \*\*D0 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  $\mu g$  IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-160286 P, (100  $\mu$ g 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) Immunofluo-rescence: 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

 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.