SANTA CRUZ BIOTECHNOLOGY, INC.

Dio-1 (M-300): sc-11445

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Dio-1 (death Inducer-Obliterator-1) is a putative transcription factor that contains two zinc-finger motifs. Dio-1 translocates to the nucleus, and activates apoptosis during limb development. Programmed cell death, a highly regulated form of apoptosis, plays an important role in determining the amount of tissue, the shape and the definition of each digit during limb development. Dio-1 expression is upregulated when an apoptotic signal is detected, and subsequently apoptosis is induced. This process is similar to the expression of NFκB and NGF in response to external signals. Dio-1 expression is suppressed by caspase inhibitors and Bcl-2 expression. This supports the theory that Dio-1 functions in the onset of programmed cell death.

REFERENCES

1. Martin, D.P., et al. 1988. Inhibitors of protein synthesis and RNA synthesis prevent neuronal death caused by nerve growth factor deprivation. J. Cell Biol. 106: 829-844.
2. Jacobson, M.D., et al. 1997. Programmed cell death in animal development. Cell 88: 347-354.
3. Kanegae, Y., et al. 1998. Role of Rel/NFκB transcription factors during the outgrowth of the vertebrate limb. Nature 392: 611-614.
4. Chen, Y., et al. 1998. Shaping limbs by apoptosis. J. Exp. Zool. 282: 691-702.
5. Garcia-Domingo, D., et al. 1999. DIO-1 is a gene involved in onset of apoptosis *in vitro,* whose misexpression disrupts limb development. Proc. Natl. Acad. Sci. USA 96: 7992-7997.
6. Hock, J.M., et al. 2001. Osteoblast apoptosis and bone turnover. J. Bone Miner. Res. 16: 975-984.
7. Garcia-Domingo, D., et al. 2003. Death inducer-obliterator 1 triggers apoptosis after nuclear translocation and caspase upregulation. Mol. Cell. Biol. 23: 3216-3225.
8. Sanchez-Pulido, L., et al. 2004. SPOC: a widely distributed domain associated with cancer, apoptosis and transcription. BMC Bioinformatics 5: 91.

CHROMOSOMAL LOCATION

Genetic locus: DIDO1 (human) mapping to 20q13.33; Dido1 (mouse) mapping to 2 H4.

SOURCE

Dio-1 (M-300) is a rabbit polyclonal antibody raised against amino acids 315-614 representing full length Dio-1 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

Dio-1 (M-300) is recommended for detection of Dio-1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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 Dio-1 siRNA (h): sc-35194, Dio-1 siRNA (m): sc-35195, Dio-1 shRNA Plasmid (h): sc-35194-SH, Dio-1 shRNA Plasmid (m): sc-35195-SH, Dio-1 shRNA (h) Lentiviral Particles: sc-35194-V and Dio-1 shRNA (m) Lentiviral Particles: sc-35195-V.

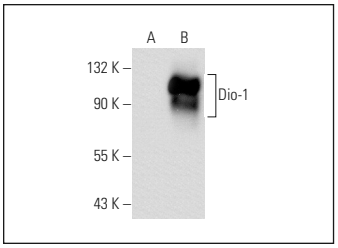
Molecular Weight of DIDO4/DIDO2/a isoforms: 244/129/61 kDa.

Positive Controls: Dio-1 (h2): 293T Lysate: sc-159185, Jurkat whole cell lysate: sc-2204 or Jurkat nuclear extract: sc-2132.

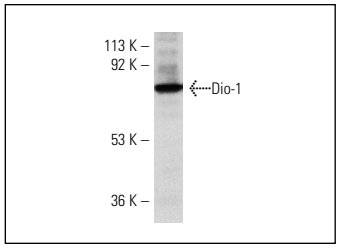
RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



Dio-1 (M-300): sc-11445. Western blot analysis of Dio-1 expression in non-transfected: sc-117752 (**A**) and human Dio-1 transfected: sc-159185 (**B**) 293T whole cell lysates.



Dio-1 (M-300): sc-11445. Western blot analysis of Dio-1 expression in Jurkat nuclear extract.

RESEARCH USE

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

MONOS Satisfaction Guaranteed

Try **Dio-1 (B-9): sc-25264** or **Dio-1 (C-10): sc-393453**, our highly recommended monoclonal alternatives to Dio-1 (M-300).