SANTA CRUZ BIOTECHNOLOGY, INC.

Dio-1 (h): 293T Lysate: sc-176595

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. Chen, Y. et al. 1998. Shaping limbs by apoptosis. J. Exp. Zool. 282: 691-702.
4. Kanegae, Y., et al. 1998. Role of Rel/NFκB transcription factors during the outgrowth of the vertebrate limb. Nature 392: 611-614.
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.
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CHROMOSOMAL LOCATION

Genetic locus: DIDO1 (human) mapping to 20q13.33.

PRODUCT

Dio-1 (h): 293T Lysate represents a lysate of human Dio-1 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

APPLICATIONS

Dio-1 (h): 293T Lysate is suitable as a Western Blotting positive control for human reactive Dio-1 antibodies. Recommended use: 10-20 µl per lane.

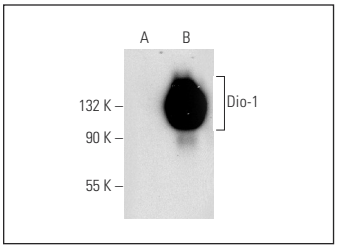
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

Dio-1 (B-9): sc-25264 is recommended as a positive control antibody for Western Blot analysis of enhanced human Dio-1 expression in Dio-1 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



Dio-1 (B-9): sc-25264. Western blot analysis of Dio-1 expression in non-transfected: sc-117752 (**A**) and human Dio-1 transfected: sc-176595 (**B**) 293T whole cell lysates.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. 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 for detailed protocols and support products.