Dio-1 (C-10): sc-393453

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BIOTECHNOLOGY

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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

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3. Chen, Y. and Zhao, X. 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.

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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 (mouse) mapping to 2 H4.

SOURCE

Dio-1 (C-10) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 553-578 near the C-terminus of Dio-1 of mouse origin.

PRODUCT

Each vial contains 200 μg IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-393453 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

Dio-1 (C-10) is recommended for detection of Dio-1 of mouse and rat origin by Western Blotting (starting dilution 1:100, 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 (m): sc-35195, Dio-1 shRNA Plasmid (m): sc-35195-SH and Dio-1 shRNA (m) Lentiviral Particles: sc-35195-V.

Molecular Weight of Dio-1 isoforms DIDO4/DIDO2/a: 244/129/61 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795.

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. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA
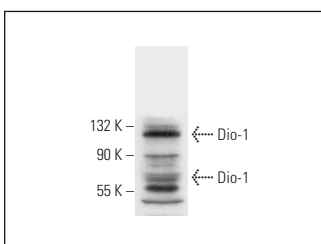
Dio-1 (C-10): sc-393453. Western blot analysis of Dio-1 expression in SP2/0 whole cell lysate.

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 for detailed protocols and support products.