

# Id2 (m2): 293T Lysate: sc-120939

## BACKGROUND

Members of the Id family of basic helix-loop-helix (bHLH) proteins include Id1, Id2, Id3 and Id4. They are ubiquitously expressed and dimerize with members of the class A and B HLH proteins. Due to the absence of the basic region, the resulting heterodimers cannot bind DNA. The Id-type proteins thus appear to negatively regulate DNA binding of bHLH proteins. Since Id1 inhibits DNA binding of E12 and MyoD, it apparently functions to inhibit muscle-specific gene expression. Under conditions that facilitate muscle cell differentiation, the Id protein levels fall, allowing E12 and/or E47 to form heterodimers with MyoD and myogenin, which in turn activate myogenic differentiation. It has been shown that expression of each of the Id proteins is strongly dependent on growth factor activation and that reduction of Id mRNA levels by antisense oligonucleotides leads to a delayed reentry of arrested cells into the cell cycle following growth factor stimulation.

## REFERENCES

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3. Sun, X., Copeland, N.G., Jenkins, N.A. and Baltimore, D. 1991. Id proteins Id1 and Id2 selectively inhibit DNA binding by one class of helix-loop-helix proteins. *Mol. Cell. Biol.* 11: 5603-5611.
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5. Riechmann, V., van Cruchten, I. and Sablitzky, F. 1994. The expression pattern of Id4, a novel dominant negative helix-loop-helix protein, is distinct from Id1, Id2 and Id3. *Nucleic Acids Res.* 22: 749-755.
6. Barone, M.V., Pepperkok, R., Peverali, F.A. and Philipson, L. 1994. Id proteins control growth induction in mammalian cells. *Proc. Natl. Acad. Sci. USA* 91: 4985-4988.
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## CHROMOSOMAL LOCATION

Genetic locus: Id2 (mouse) mapping to 12 A1.3.

## PRODUCT

Id2 (m2): 293T Lysate represents a lysate of mouse Id2 transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

## RESEARCH USE

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

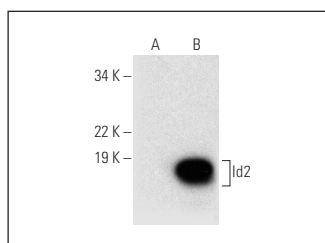
## APPLICATIONS

Id2 (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Id2 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.

Id2 (E-7): sc-398104 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse Id2 expression in Id2 transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

## DATA



Id2 (E-7): sc-398104. Western blot analysis of Id2 expression in non-transfected: sc-117752 (A) and mouse Id2 transfected: sc-120939 (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.

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.