



## Id1 (1-154): sc-4065 WB

### 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 Myo D, 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 Myo D 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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### SOURCE

Id1 (1-154) is expressed in *E. coli* as a 43 kDa tagged fusion protein corresponding to full length (amino acids 1-154) Id1 of human origin.

### PRODUCT

Id1 (1-154) is purified from bacterial lysates (>98%) by glutathione agarose affinity chromatography; supplied as 10 µg in 0.1 ml SDS-PAGE loading buffer.

### APPLICATIONS

Id1 (1-154) is suitable as a Western blotting control for sc-427, sc-488 and sc-734.

### STORAGE

Store at -20° C; stable for one year from the date of shipment.

### RESEARCH USE

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