

Id2 (I-16)-R: sc-26329-R

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 re-entry of arrested cells into the cell cycle following growth factor stimulation.

REFERENCES

1. Benezra, R., et al. 1990. The protein Id: a negative regulator of helix-loop-helix DNA binding proteins. *Cell* 61: 49-59.
2. Christy, B.A., et al. 1991. An Id-related helix-loop-helix protein encoded by a growth factor-inducible gene. *Proc. Natl. Acad. Sci. USA* 88: 1815-1819.
3. Sun, X., et al. 1991. Id proteins Id1 and Id2 selectively inhibit DNA binding by one class of helix-loop-helix proteins. *Mol. Cell. Biol.* 11: 5603-5611.
4. Neuhold, L.A., et al. 1993. HLH forced dimers: tethering MyoD to E47 generates a dominant positive myogenic factor insulated from negative regulation by Id. *Cell* 74: 1033-1042.
5. Riechmann, V., et al. 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., et al. 1994. Id proteins control growth induction in mammalian cells. *Proc. Natl. Acad. Sci. USA* 91: 4985-4988.

CHROMOSOMAL LOCATION

Genetic locus: ID2 (human) mapping to 2p25.1; Id2 (mouse) mapping to 12 A1.3.

SOURCE

Id2 (I-16)-R is a rabbit polyclonal affinity purified antibody raised against a peptide mapping within an internal region of Id2 of human origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-26329 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

Id2 (I-16)-R is recommended for detection of Id2 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

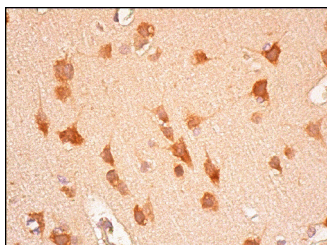
Id2 (I-16)-R is also recommended for detection of Id2 in additional species, including equine, canine, bovine, porcine and avian.

Suitable for use as control antibody for Id2 siRNA (h): sc-38000, Id2 siRNA (m): sc-38001, Id2 shRNA Plasmid (h): sc-38000-SH, Id2 shRNA Plasmid (m): sc-38001-SH, Id2 shRNA (h) Lentiviral Particles: sc-38000-V and Id2 shRNA (m) Lentiviral Particles: sc-38001-V.

Molecular Weight of Id2: 15 kDa.

Positive Controls: SK-N-MC cell lysate: sc-2237.

DATA



Id2 (I-16)-R: sc-26329-R. Immunoperoxidase staining of formalin fixed, paraffin-embedded human cerebral cortex tissue showing cytoplasmic staining of neuronal cells and glial cells.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

MONOS
Satisfaction
Guaranteed

Try **Id2 (E-7): sc-398104** or **Id2 (2457C5a): sc-81298**, our highly recommended monoclonal alternatives to Id2 (I-16). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **Id2 (E-7): sc-398104**.