

basonuclin (N-15): sc-13257

BACKGROUND

The zinc finger protein, basonuclin, is a putative rDNA transcription factor with highly restricted tissue distribution. Basonuclin is abundantly expressed in keratinocytes of the basal layer of the epidermis, the outer sheath of hair follicles and in the germ cells of the testis and ovary. Although basonuclin is associated with chromatin throughout the cell cycle, including mitosis, it disappears when cells become post-mitotic. In the epidermis, basonuclin, which is mainly localized to the cytoplasm, translocates to basal cell nuclei during different stages of keratinocyte growth. Basonuclin may enhance rRNA synthesis by elevating transcription from an rDNA promoter and inhibiting RNA polymerase I transcription through its zinc finger domain. Therefore, basonuclin may be a cell-type-specific transcription factor for rDNA transcription.

REFERENCES

1. Tseng, H. et al. 1998. Basonuclin, a zinc finger protein associated with epithelial expansion and proliferation. *Front. Biosci.* 3: 985-988.
2. Mahoney, M.G., et al. 1998. Translocation of the zinc finger protein basonuclin from the mouse germ cell nucleus to the midpiece of the spermatozoon during spermiogenesis. *Biol. Reprod.* 59: 388-394.
3. Iuchi, S., et al. 1999. Basonuclin, a zinc finger protein of keratinocytes and reproductive germ cells, binds to the rRNA gene promoter. *Proc. Natl. Acad. Sci. USA* 96: 9628-9632.
4. Tseng, H., et al. 1999. Basonuclin in murine corneal and lens epithelia correlates with cellular maturation and proliferative ability. *Differentiation* 65: 221-227.
5. Tseng, H., et al. 1999. Basonuclin is associated with the ribosomal RNA genes on human keratinocyte mitotic chromosomes. *J. Cell Sci.* 112: 3039-3047.
6. Iuchi, S., et al. 2000. Alternative subcellular locations of keratinocyte basonuclin. *Exp. Dermatol.* 9: 178-184.
7. Tian, Q., et al. 2001. Function of basonuclin in increasing transcription of the ribosomal RNA genes during mouse oogenesis. *Development* 128: 407-416.

CHROMOSOMAL LOCATION

Genetic locus: BNC1 (human) mapping to 15q25.2; Bnc1 (mouse) mapping to 7 D3.

SOURCE

basonuclin (N-15) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of basonuclin 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-13257 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-13257 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

basonuclin (N-15) is recommended for detection of basonuclin 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

basonuclin (N-15) is also recommended for detection of basonuclin in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for basonuclin siRNA (h): sc-37708, basonuclin siRNA (m): sc-37709, basonuclin shRNA Plasmid (h): sc-37708-SH, basonuclin shRNA Plasmid (m): sc-37709-SH, basonuclin shRNA (h) Lentiviral Particles: sc-37708-V and basonuclin shRNA (m) Lentiviral Particles: sc-37709-V.

basonuclin (N-15) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of basonuclin: 120 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

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 or our catalog for detailed protocols and support products.



Try **basonuclin (1F4): sc-517114**, our highly recommended monoclonal alternative to basonuclin (N-15).