SANTA CRUZ BIOTECHNOLOGY, INC.

NAB1 (D-20): sc-12147

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Transcriptional control is in part regulated by interactions between DNA-bound transcription factors, such as Egr1/NGFI-A, and coregulatory proteins, such as NAB (for NGFI-A-binding proteins). The evolutionarily conserved NAB proteins, NAB1 and NAB2, are corepressors of Egr1/NGFI-A. Both NAB1 and NAB2 contain an amino-terminal NAB-conserved domain 1 (NCB1), which is required for binding NGFI-A, and a carboxy-terminal NCD2, which is responsible for the repressor function of NAB proteins. NAB1 requires NGFI-A to gain access to DNA, indicating that NAB1 is an active repressor that works by a direct mechanism. NAB1, which is constitutively expressed, is localized exclusively in the nucleus and may play a role in controlling processes such as cell division, differentiation and apoptosis.

REFERENCES

1. Russo, M.W., et al. 1993. Transcriptioanl activity of the zinc finger protein NGFI-A is influenced by its interaction with a cellular factor. Mol. Cell. Biol. 13: 6858-6865.
2. Russo, M.W., et al. 1995. Identification of NAB1, a repressor of NGFI-A- and Krox20-mediated transcription. Proc. Natl. Acad. Sci. USA 92: 6873-6877.
3. Svaren, J., et al. 1996. NAB2, a corepressor of NGFI-A (Egr-1) and Kros20, is induced proliferative and differentiative stimuli. Mol. Cell. Biol. 16: 3545-3553.
4. Swirnoff, A.H., et al. 1998. Nab1, a corepressor of NGFI-A (Egr-1), contains an active transcriptional repression domain. Mol. Cell. Biol. 18: 512-524.
5. Sevetson, B.R., et al. 2000. A novel activation function for NAB proteins in EGR-dependent transcription fo the luteinizing hormone β gene. J. Biol. Chem. 275: 9749-9757.
6. Braddock, M., et al. 2000. Therapeutic applications of the transcriptional corepressor proteins NAB1 and NAB2 in regenerative medicine. IDrugs 3: 783-787.

CHROMOSOMAL LOCATION

Genetic locus: NAB1 (human) mapping to 2q32.2; Nab1 (mouse) mapping to 1 C1.1.

SOURCE

NAB1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of NAB1 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-12147 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

NAB1 (D-20) is recommended for detection of NAB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

NAB1 (D-20) is also recommended for detection of NAB1 in additional species, including canine, bovine, porcine and avian.

Suitable for use as control antibody for NAB1 siRNA (h): sc-38089, NAB1 siRNA (m): sc-38090, NAB1 shRNA Plasmid (h): sc-38089-SH, NAB1 shRNA Plasmid (m): sc-38090-SH, NAB1 shRNA (h) Lentiviral Particles: sc-38089-V and NAB1 shRNA (m) Lentiviral Particles: sc-38090-V.

Molecular Weight of NAB1: 54 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200 or SK-N-MC cell lysate: sc-2237.

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) 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.

SELECT PRODUCT CITATIONS

1. Buitrago, M., et al. 2005. The transcriptional repressor NAB1 is a specific regulator of pathological cardiac hypertrophy. Nat. Med. 11: 837-844.
2. Broderick, T.L., et al. 2012. Downregulation in GATA4 and downstream structural and contractile genes in the db/db mouse heart. ISRN Endocrinol. 2012: 736860.
3. Broderick, T.L., et al. 2012. Expression of cardiac GATA4 and downstream genes after exercise training in the db/db mouse. Pathophysiology 19: 193-203.

RESEARCH USE

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