

# NAB1 (2607C2a): sc-81565

## BACKGROUND

Transcriptional control is in part regulated by interactions between DNA-bound transcription factors, such as Egr-1/NGFI-A, and co-regulatory proteins, such as NAB (for NGFI-A-binding proteins). The evolutionarily conserved NAB proteins, NAB1 and NAB2, are corepressors of Egr-1/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

- Russo, M.W., et al. 1993. Transcriptional activity of the zinc finger protein NGFI-A is influenced by its interaction with a cellular factor. *Mol. Cell. Biol.* 13: 6858-6865.
- Russo, M.W., et al. 1995. Identification of NAB1, a repressor of NGFI-A- and Krox-20-mediated transcription. *Proc. Natl. Acad. Sci. USA* 92: 6873-6877.
- Svaren, J., et al. 1996. NAB2, a corepressor of NGFI-A (Egr-1) and Krox-20, is induced by proliferative and differentiative stimuli. *Mol. Cell. Biol.* 16: 3545-3553.
- Swirloff, 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.
- Svetson, B.R., et al. 2000. A novel activation function for NAB proteins in EGR-dependent transcription of the luteinizing hormone  $\beta$  gene. *J. Biol. Chem.* 275: 9749-9757.
- Braddock, M., et al. 2000. Therapeutic applications of the transcriptional corepressor proteins NAB1 and NAB2 in regenerative medicine. *Drugs* 3: 783-787.
- Mussnug, J.H., et al. 2005. NAB1 is an RNA binding protein involved in the light-regulated differential expression of the light-harvesting antenna of *Chlamydomonas reinhardtii*. *Plant Cell* 17: 3409-3421.
- Buitrago, M., et al. 2005. The transcriptional repressor NAB1 is a specific regulator of pathological cardiac hypertrophy. *Nat. Med.* 11: 837-844.
- Forster, B., et al. 2006. Comparative proteomics of high light stress in the model alga *Chlamydomonas reinhardtii*. *Proteomics* 6:4309-4320.

## CHROMOSOMAL LOCATION

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

## SOURCE

NAB1 (2607C2a) is a mouse monoclonal antibody raised against a recombinant protein corresponding to a region near the C-terminus of NAB1 of human origin.

## PRODUCT

Each vial contains 100  $\mu$ g IgG<sub>1</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 1.0% stabilizer protein.

## APPLICATIONS

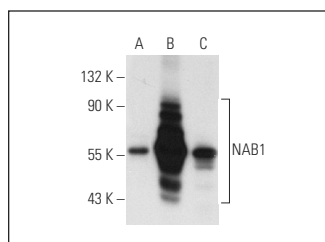
NAB1 (2607C2a) is recommended for detection of NAB1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)].

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.

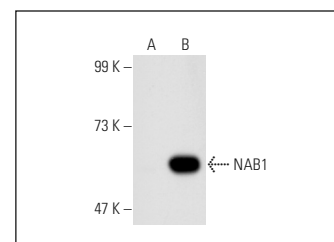
Molecular Weight of NAB1: 54 kDa.

Positive Controls: NAB1 (m): 293T Lysate: sc-121928, NAB1 (h): 293T Lysate: sc-115360 or SK-N-MC cell lysate: sc-2237.

## DATA



NAB1 (2607C2a): sc-81565. Western blot analysis of NAB1 expression in non-transfected 293T: sc-117752 (A), human NAB1 transfected 293T: sc-115360 (B) and SK-N-MC (C) whole cell lysates.



NAB1 (2607C2a): sc-81565. Western blot analysis of NAB1 expression in non-transfected: sc-117752 (A) and mouse NAB1 transfected: sc-121928 (B) 293T whole cell lysates.

## SELECT PRODUCT CITATIONS

- Ren, Y.R., et al. 2012. Unbiased discovery of interactions at a control locus driving expression of the cancer-specific therapeutic and diagnostic target, mesothelin. *J. Proteome Res.* 11: 5301-5310.
- Hancock, M.H., et al. 2020. Human cytomegalovirus miRNAs regulate TGF- $\beta$  to mediate myelosuppression while maintaining viral latency in CD34<sup>+</sup> hematopoietic progenitor cells. *Cell Host Microbe* 27: 104-114.

## 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](http://www.scbt.com) for detailed protocols and support products.