SANTA CRUZ BIOTECHNOLOGY, INC.

SNF2L (A-13): sc-79088

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

SNF2L, also known as SMARCA1 (SWI/SNF related, matrix associated, Actin dependent regulator of chromatin, subfamily a, member 1), SWI or ISWI, is a 1,054 amino acid protein that localizes to the nucleus and contains one helicase C-terminal domain, one helicase ATP-binding domain and two SANT domains. Expressed as multiple alternatively spliced isoforms, SNF2L exists as a component of the nucleosome-remodeling factor (NURF) complex where it helps to facilitate the ATP-dependent perturbation of chromatin structure and may also be involved in brain development and neurite outgrowth. The gene encoding SNF2L maps to human chromosome X, which contains nearly 153 million base pairs and houses over 1,000 genes.

REFERENCES

1. Okabe, I., Bailey, L.C., Attree, O., Srinivasan, S., Perkel, J.M., Laurent, B.C., Carlson, M., Nelson, D.L. and Nussbaum, R.L. 1992. Cloning of human and bovine homologs of SNF2/SWI2: a global activator of transcription in yeast S. cerevisiae. Nucleic Acids Res. 20: 4649-4655.
2. Lazzaro, M.A. and Picketts, D.J. 2001. Cloning and characterization of the murine Imitation Switch (ISWI) genes: differential expression patterns suggest distinct developmental roles for Snf2h and Snf2l. J. Neurochem. 77: 1145-1156.
3. Barak, O., Lazzaro, M.A., Lane, W.S., Speicher, D.W., Picketts, D.J. and Shiekhattar, R. 2003. Isolation of human NURF: a regulator of Engrailed gene expression. EMBO J. 22: 6089-6100.
4. Barak, O., Lazzaro, M.A., Cooch, N.S., Picketts, D.J. and Shiekhattar, R. 2004. A tissue-specific, naturally occurring human SNF2L variant inactivates chromatin remodeling. J. Biol. Chem. 279: 45130-45138.
5. Wang, F., Zhang, R., Beischlag, T.V., Muchardt, C., Yaniv, M. and Hankinson, O. 2004. Roles of Brahma and Brahma/SWI2-related gene 1 in hypoxic induction of the erythropoietin gene. J. Biol. Chem. 279: 46733-46741.
6. Banting, G.S., Barak, O., Ames, T.M., Burnham, A.C., Kardel, M.D., Cooch, N.S., Davidson, C.E., Godbout, R., McDermid, H.E. and Shiekhattar, R. 2005. CECR2, a protein involved in neurulation, forms a novel chromatin remodeling complex with SNF2L. Hum. Mol. Genet. 14: 513-524.
7. Lazzaro, M.A., Pεpin, D., Pescador, N., Murphy, B.D., Vanderhyden, B.C. and Picketts, D.J. 2006. The imitation switch protein SNF2L regulates steroidogenic acute regulatory protein expression during terminal differentiation of ovarian granulosa cells. Mol. Endocrinol. 20: 2406-2417.
8. Lazzaro, M.A., Todd, M.A., Lavigne, P., Vallee, D., De Maria, A. and Picketts, D.J. 2008. Characterization of novel isoforms and evaluation of SNF2L/SMARCA1 as a candidate gene for X-linked mental retardation in 12 families linked to Xq25-26. BMC Med. Genet. 9: 11.
9. Xia, Y., Jiang, B., Zou, Y., Gao, G., Shang, L., Chen, B., Liu, Q. and Gong, Y. 2008. Sp1 and CREB regulate basal transcription of the human SNF2L gene. Biochem. Biophys. Res. Commun. 368: 438-444.

CHROMOSOMAL LOCATION

Genetic locus: SMARCA1 (human) mapping to Xq25; Smarca1 (mouse) mapping to X A4.

SOURCE

SNF2L (A-13) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of SNF2L 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-79088 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-79088 X, 200 µg/0.1 ml.

APPLICATIONS

SNF2L (A-13) is recommended for detection of SNF2L 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).

SNF2L (A-13) is also recommended for detection of SNF2L in additional species, including equine, canine and bovine.

Suitable for use as control antibody for SNF2L siRNA (h): sc-76532, SNF2L siRNA (m): sc-76533, SNF2L shRNA Plasmid (h): sc-76532-SH, SNF2L shRNA Plasmid (m): sc-76533-SH, SNF2L shRNA (h) Lentiviral Particles: sc-76532-V and SNF2L shRNA (m) Lentiviral Particles: sc-76533-V.

SNF2L (A-13) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of SNF2L: 123 kDa.

Positive Controls: NIH/3T3 whole cell lysate: sc-2210.

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.

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.