

ALX3 (C-16): sc-22070

BACKGROUND

Aristaless-related genes are a group of paired-related homeobox genes which play a role in regulating vertebrate embryogenesis. The homeodomain transcription factor aristaless-like 3 (ALX3) is expressed in mouse embryos from 8 days of gestation, predominantly in neural crest-derived mesenchyme and in lateral plate mesoderm. Expression analysis of human and mouse tissue reveals predominant ALX3 expression in brain tissue. The Alx3 gene maps to chromosome 1p13.3 and encodes a 343 amino acid protein. Preferential methylation of Alx3 occurs in advanced-stage neuroblastoma and may repress ALX3 expression. Treatment with the methylation inhibitor 5-aza-2'-deoxycytidine restores ALX3 expression. Alx3^{-/-} mice lack a phenotype distinct from wild-type mice, however Alx3/Alx4 double mutants demonstrate severe craniofacial abnormalities not present in Alx4 single mutants. Specifically, Alx3/Alx4 double mutant newborn mice have cleft nasal regions in addition to malformation of other neural crest-derived skull structures.

REFERENCES

1. Ten Berge, D., et al. 1998. Mouse Alx3: an aristaless-like homeobox gene expressed during embryogenesis in ectomesenchyme and lateral plate mesoderm. *Dev. Biol.* 199: 11-25.
2. Meijlink, F., et al. 1999. Vertebrate aristaless-related genes. *Int. J. Dev. Biol.* 43: 651-663.
3. Beverdam, A., et al. 2001. Severe nasal clefting and abnormal embryonic apoptosis in Alx3/Alx4 double mutant mice. *Development* 128: 3975-3986.
4. Online Mendelian Inheritance in Man, OMIM[™]. 2001. Johns Hopkins University, Baltimore, MD. MIM Number: 606014. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
5. Wimmer, K., et al. C., 2002. Combined restriction landmark genomic scanning and virtual genome scans identify a novel human homeobox gene, ALX3, that is hypermethylated in neuroblastoma. *Genes Chromosomes Cancer* 33: 285-294.

CHROMOSOMAL LOCATION

Genetic locus: ALX3 (human) mapping to 1p13.3; Alx3 (mouse) mapping to 3 F2.3.

SOURCE

ALX3 (C-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of ALX3 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-22070 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-22070 X, 200 µg/0.1 ml.

APPLICATIONS

ALX3 (C-16) is recommended for detection of ALX3 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).

ALX3 (C-16) is also recommended for detection of ALX3 in additional species, including equine, bovine and porcine.

Suitable for use as control antibody for ALX3 siRNA (h): sc-38645, ALX3 siRNA (m): sc-38646, ALX3 shRNA Plasmid (h): sc-38645-SH, ALX3 shRNA Plasmid (m): sc-38646-SH, ALX3 shRNA (h) Lentiviral Particles: sc-38645-V and ALX3 shRNA (m) Lentiviral Particles: sc-38646-V.

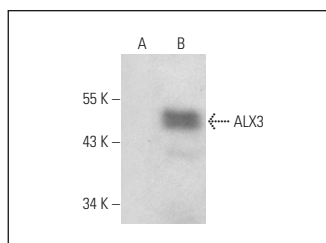
ALX3 (C-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Positive Controls: ALX3 (m): 293 Lysate: sc-178274.

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.

DATA



ALX3 (C-16): sc-22070. Western blot analysis of ALX3 expression in non-transfected: sc-110760 (A) and mouse ALX3 transfected: sc-178274 (B) 293 whole cell lysates.

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.