

# ALX4 (KAB4): sc-33643

## BACKGROUND

ALX4 (aristaless-like homeobox 4) is a DNA-binding transcription factor involved in skull and limb development. It is a nuclear protein with expression restricted to bone. Defects in ALX4 are the cause of parietal foramina 2 (PFM2), also known as foramina parietalia permagna. PFM2 is an autosomal dominant disease characterized by oval defects of the parietal bones caused by deficient ossification around the parietal notch, which is normally obliterated during the fifth fetal month. PFM2 is also a clinical feature of Potocki-Shaffer syndrome. BMP induces *Mx2* and *Alx4* expression in calvarial mesenchyme tissue. Northern blot analysis demonstrates that expression of both the human and mouse *ALX4* genes is restricted to bone.

## CHROMOSOMAL LOCATION

Genetic locus: *ALX4* (human) mapping to 11p11.2; *Alx4* (mouse) mapping to 2 E1.

## SOURCE

ALX4 (KAB4) is a mouse monoclonal antibody raised against purified recombinant full length ALX4 of mouse origin.

## PRODUCT

Each vial contains 200 µg IgG<sub>1</sub> kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ALX4 (KAB4) is available conjugated to agarose (sc-33643 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-33643 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-33643 PE), fluorescein (sc-33643 FITC), Alexa Fluor® 488 (sc-33643 AF488), Alexa Fluor® 546 (sc-33643 AF546), Alexa Fluor® 594 (sc-33643 AF594) or Alexa Fluor® 647 (sc-33643 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-33643 AF680) or Alexa Fluor® 790 (sc-33643 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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## APPLICATIONS

ALX4 (KAB4) is recommended for detection of ALX4 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for ALX4 siRNA (h): sc-44976, ALX4 siRNA (m): sc-44977, ALX4 shRNA Plasmid (h): sc-44976-SH, ALX4 shRNA Plasmid (m): sc-44977-SH, ALX4 shRNA (h) Lentiviral Particles: sc-44976-V and ALX4 shRNA (m) Lentiviral Particles: sc-44977-V.

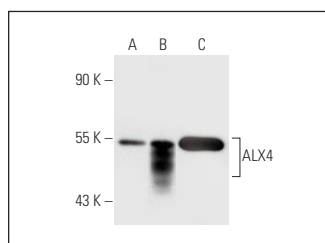
Molecular Weight of ALX4: 60 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, ALX4 (m): 293T Lysate: sc-126413 or 3T3-L1 cell lysate: sc-2243.

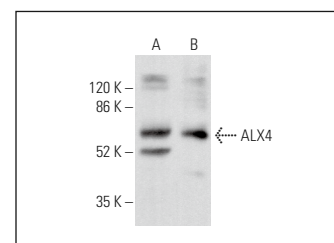
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 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 m-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850. 4) Immunohistochemistry: use m-IgGκ BP-HRP: sc-516102 with DAB, 50X: sc-24982 and Immunohistomount: sc-45086, or Organo/Limonene Mount: sc-45087.

## DATA



ALX4 (KAB4): sc-33643. Western blot analysis of ALX4 expression in non-transfected 293T: sc-117752 (A), mouse ALX4 transfected 293T: sc-126413 (B) and 3T3-L1 (C) whole cell lysates.



ALX4 (KAB4): sc-33643. Western blot analysis of ALX4 expression in Jurkat (A) and HeLa (B) whole cell lysates. Detection reagent used: m-IgGκ BP-HRP: sc-516102.

## SELECT PRODUCT CITATIONS

- Garg, A., et al. 2017. ALX4 relays sequential FGF signaling to induce lacrimal gland morphogenesis. *PLoS Genet.* 13: e1007047.
- Ibrahim, A.M., et al. 2021. A matrisome RNA signature from early-pregnancy mouse mammary fibroblasts predicts distant metastasis-free breast cancer survival in humans. *Breast Cancer Res.* 23: 90.
- Li, M., et al. 2021. Circular RNA Circ\_0000098 elevates ALX4 expression via adsorbing miR-1204 to inhibit the progression of hepatocellular carcinoma. *Front. Oncol.* 11: 696078.

## 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.