SANTA CRUZ BIOTECHNOLOGY, INC.

FOXI2 (E-5): sc-515114

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FOXI2 (forkhead box I2) is a 318 amino acid nuclear protein that contains one fork-head DNA-binding domain and is a member of the FOX family of transcription factors. The FOX family is a large group of proteins (consisting of at least 43 members) that share a common DNA binding domain termed winged-helix or forkhead domain. FOX transcription factors play important roles in development, differentiation, aging and hormone responsiveness. Considered a cranial epidermis marker, FOXI2 expression is mainly confined to subsets of cells in epithelial structures and particular ducts, in addition to the developing forebrain and neural retina. It is suggested that FOXI2 may be involved in regulating cellular identity. FOXI2 is encoded by a gene located on human chromosome 10, which contains over 800 genes and 135 million nucleotides, making up nearly 4.5% of the human genome.

REFERENCES

1. Hulander, M., et al. 1998. The winged helix transcription factor Fkh10 is required for normal development of the inner ear. Nat. Genet. 20: 374-376.
2. Solomon, K.S., et al. 2003. Expression and phylogenetic analyses of three zebrafish FOXI class genes. Dev. Dyn. 228: 301-307.
3. Nissen, R.M., et al. 2003. Zebrafish FOXI one modulates cellular responses to Fgf signaling required for the integrity of ear and jaw patterning. Development 130: 2543-2554.
4. Ohyama, T. and Groves, A.K. 2004. Expression of mouse FOXI class genes in early craniofacial development. Dev. Dyn. 231: 640-646.
5. Wijchers, P.J., et al. 2005. Cloning and analysis of the murine FOXI2 transcription factor. Biochim. Biophys. Acta 1731: 133-138.
6. Pohl, B.S., et al. 2005. The Fox gene family in *Xenopus laevis:* FOXI2, FoxM1 and FoxP1 in early development. Int. J. Dev. Biol. 49: 53-58.

CHROMOSOMAL LOCATION

Genetic locus: FOXI2 (human) mapping to 10q26.2; Foxi2 (mouse) mapping to 7 F3.

SOURCE

FOXI2 (E-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 269-291 near the C-terminus of FOXI2 of human origin.

PRODUCT

Each vial contains 200 µg IgG_3 kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-515114 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-515114 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

FOXI2 (E-5) is recommended for detection of FOXI2 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

Suitable for use as control antibody for FOXI2 siRNA (h): sc-90482, Foxi2 siRNA (m): sc-145226, FOXI2 shRNA Plasmid (h): sc-90482-SH, Foxi2 shRNA Plasmid (m): sc-145226-SH, FOXI2 shRNA (h) Lentiviral Particles: sc-90482-V and Foxi2 shRNA (m) Lentiviral Particles: sc-145226-V.

FOXI2 (E-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

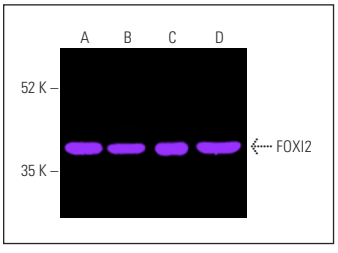
Molecular Weight of FOXI2: 33 kDa.

Positive Controls: Jurkat whole cell lysate: sc-2204, K-562 whole cell lysate: sc-2203 or HeLa nuclear extract: sc-2120.

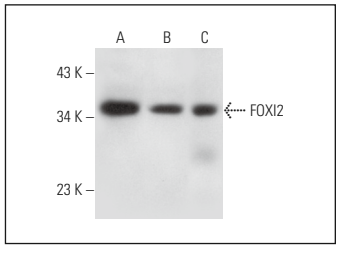
RECOMMENDED SUPPORT REAGENTS

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.

DATA



FOXI2 (E-5): sc-515114. Fluorescent western blot analysis of FOXI2 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates and Jurkat (**C**) and HeLa (**D**) nuclear extracts. Blocked with UltraCruz® Blocking Reagent: sc-516214. Detection reagent used: m-IgG_3 BP-CFL 555: sc-533674.



FOXI2 (E-5): sc-515114. Western blot analysis of FOXI2 expression in Jurkat (**A**) and K-562 (**B**) whole cell lysates and human brain tissue extract (**C**).

SELECT PRODUCT CITATIONS

1. Fan, Y., et al. 2022. Forkhead box i2 transcription factor regulates systemic energy metabolism via neuropeptide AgRP. Diabetes 71: 2106-2122.

RESEARCH USE

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