SANTA CRUZ BIOTECHNOLOGY, INC.

KLF3 (B-12): sc-514500

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Krüppel-like factors (KLFs) comprise a family of evolutionarily conserved zinc finger-containing transcription factors with diverse regulatory functions in cell growth, proliferation, differentiation and embryogenesis. Individual members of the Sp1-like/KLF family can function either as activators or repressors, depending on which promoter they bind and the coregulators with which they interact. KLF6, also designated Zf9 or CPBP (core promoter-binding protein), and KLF3 are Krüppel-like zinc finger containing transcription factors. KLF6 is rapidly induced during hepatic stellate cell activation and transactivates a reporter gene driven by the collagen I promoter, suggesting KLF6 plays a role in the response to tissue injury. KLF3 may play a role in hematopoiesis.

CHROMOSOMAL LOCATION

Genetic locus: KLF3 (human) mapping to 4p14; Klf3 (mouse) mapping to 5 C3.1.

SOURCE

KLF3 (B-12) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 175-192 within an internal region of KLF3 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-514500 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-514500 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

KLF3 (B-12) is recommended for detection of KLF3 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 KLF3 siRNA (h): sc-44963, KLF3 siRNA (m): sc-44964, KLF3 shRNA Plasmid (h): sc-44963-SH, KLF3 shRNA Plasmid (m): sc-44964-SH, KLF3 shRNA (h) Lentiviral Particles: sc-44963-V and KLF3 shRNA (m) Lentiviral Particles: sc-44964-V.

KLF3 (B-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

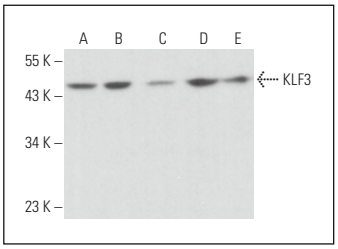
Molecular Weight of KLF3: 39 kDa.

Positive Controls: KLF3 (h): 293T Lysate: sc-370637, HCT-116 whole cell lysate: sc-364175 or HeLa whole cell lysate: sc-2200.

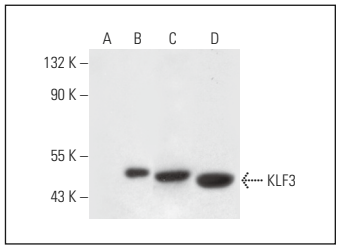
RECOMMENDED SUPPORT REAGENTS

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



KLF3 (B-12): sc-514500. Western blot analysis of KLF3 expression in K-562 (**A**), TF-1 (**B**), M1 (**C**), NIH/3T3 (**D**) and RAW 264.7 (**E**) whole cell lysates.



KLF3 (B-12): sc-514500. Western blot analysis of KLF3 expression in non-transfected 293T: sc-117752 (**A**), human KLF3 transfected 293T: sc-370637 (**B**), HCT-116 (**C**) and HeLa (**D**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Yang, G.S., et al. 2020. *Salvia miltiorrhiza*-derived miRNAs suppress vascular remodeling through regulating OTUD7B/KLF4/NMHC IIA axis. Theranostics 10: 7787-7811.
2. Qin, Y., et al. 2020. *Salvia miltiorrhiza*-derived sal-miR-58 induces autophagy and attenuates inflammation in vascular smooth muscle cells. Mol. Ther. Nucleic Acids 21: 492-511.
3. Han, J.H., et al. 2022. *Garcinia cambogia* attenuates adipogenesis by affecting CEBPB and SQSTM1/p62-mediated selective autophagic degradation of KLF3 through RPS6KA1 and Stat3 suppression. Autophagy 18: 518-539.

RESEARCH USE

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

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.