SANTA CRUZ BIOTECHNOLOGY, INC.

KLF15 (A-5): sc-271675

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

KLF15, KLF6 and KLF3 are Krüppel-like zinc finger-containing transcription factors. KLF15, a kidney-enriched Krüppel-like factor, is a transcriptonal activator that binds the CLCNKA promoter. KLF6 (also designated Zf9 or CPBP, for core promoter-binding protein) is rapidly induced during hepatic stellate cell activation and transactivates a reporter gene driven by the Collagen I promoter, suggesting that KLF6 plays a role in the response to tissue injury. KLF3 may play a role in hematopoiesis. KLF15, which is a nuclear protein, is expressed primarily in liver, heart, skeletal muscle and kidney tissues but is not detected in lymphoid tissues or bone marrow. It is an important regulator of Glut4 in both adipose and muscle tissues.

REFERENCES

1. Gray, S., et al. 2002. The Krüeppel-like factor KLF15 regulates the Insulin-sensitive glucose transporter Glut4. J. Biol. Chem. 277: 34322-34328.
2. Otteson, D.C., et al. 2004. Krüeppel-like factor 15, a zinc-finger transcriptional regulator, represses the rhodopsin and interphotoreceptor retinoid-binding protein promoters. Invest. Ophthalmol. Vis. Sci. 45: 2522-2530.

CHROMOSOMAL LOCATION

Genetic locus: KLF15 (human) mapping to 3q21.3; Klf15 (mouse) mapping to 6 D1.

SOURCE

KLF15 (A-5) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 1-23 at the N-terminus of KLF15 of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} 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-271675 X, 200 µg/0.1 ml.

KLF15 (A-5) is available conjugated to agarose (sc-271675 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-271675 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-271675 PE), fluorescein (sc-271675 FITC), Alexa Fluor® 488 (sc-271675 AF488), Alexa Fluor® 546 (sc-271675 AF546), Alexa Fluor® 594 (sc-271675 AF594) or Alexa Fluor® 647 (sc-271675 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-271675 AF680) or Alexa Fluor® 790 (sc-271675 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-271675 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

KLF15 (A-5) is recommended for detection of KLF15 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), 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).

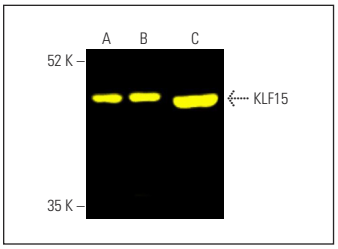
Suitable for use as control antibody for KLF15 siRNA (h): sc-45567, KLF15 siRNA (m): sc-45568, KLF15 shRNA Plasmid (h): sc-45567-SH, KLF15 shRNA Plasmid (m): sc-45568-SH, KLF15 shRNA (h) Lentiviral Particles: sc-45567-V and KLF15 shRNA (m) Lentiviral Particles: sc-45568-V.

KLF15 (A-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

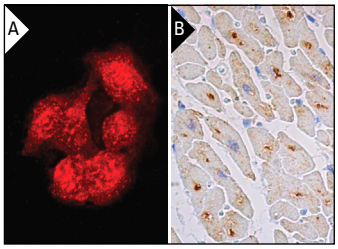
Molecular Weight of KLF15: 44 kDa.

Positive Controls: SH-SY5Y cell lysate: sc-3812, K-562 whole cell lysate: sc-2203 or human liver extract: sc-363766.

DATA



KLF15 (A-5) Alexa Fluor® 488: sc-271675 AF488. Direct fluorescent western blot analysis of KLF15 expression in SH-SY5Y (**A**) and K-562 (**B**) whole cell lysates and human liver tissue extract (**C**). Blocked with UltraCruz® Blocking Reagent: sc-516214.



KLF15 (A-5): sc-271675. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization (**A**). KLF15 (A-5) HRP: sc-271675 HRP. Direct immunoperoxidase staining of formalin fixed, paraffin-embedded human heart muscle tissue showing nuclear staining in myocytes. Blocked with 0.25X UltraCruz® Blocking Reagent: sc-516214 (**B**).

SELECT PRODUCT CITATIONS

1. Workman, A., et al. 2012. Cellular transcription factors induced in trigeminal ganglia during dexamethasone-induced reactivation from latency stimulate bovine herpesvirus 1 productive infection and certain viral promoters. J. Virol. 86: 2459-2473.
2. Hirata, Y., et al. 2022. A Piezo1/KLF15/IL-6 axis mediates immobilization-induced muscle atrophy. J. Clin. Invest. 132: 1-13.
3. Ogawa, T., et al. 2023. Downregulation of extramitochondrial BCKDH and its uncoupling from AMP deaminase in type 2 diabetic OLETF rat hearts. Physiol. Rep. 11: e15608.

RESEARCH USE

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