SANTA CRUZ BIOTECHNOLOGY, INC.

FKHRL1 (N-16): sc-9813

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FKHRL1 (forkhead in rhabdomyosarcoma-like 1), also known as FOXO3 (forkhead box O3) or FOXO3A, is a 673 amino acid transcriptional activator that belongs to the FKHR subfamily of forkhead transcription factors. Transcriptional activation of FKHR proteins is regulated by the serine/threonine kinase Akt1, which phosphorylates FKHRL1 at Threonine 32 and Serine 253. Phosphorylation by Akt1 negatively regulates FKHRL1 by promoting its export from the nucleus. Phosphorylated FKHRL1 associates with 14-3-3 proteins and this complex is retained in the cytoplasm. Growth factor withdrawal stimulates FKHRL1 dephosphorylation and nuclear translocation, leading to FKHR-induced gene-specific transcriptional activation. Within the nucleus, dephosphorylated FKHRL1 triggers apoptosis by inducing the expression of genes that are critical for cell death.

CHROMOSOMAL LOCATION

Genetic locus: FOXO3 (human) mapping to 6q21; Foxo3 (mouse) mapping to 10 B2.

SOURCE

FKHRL1 (N-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of FKHRL1 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. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9813 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-9813 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

FKHRL1 (N-16) is recommended for detection of FKHRL1 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).

FKHRL1 (N-16) is also recommended for detection of FKHRL1 in additional species, including bovine and porcine.

Suitable for use as control antibody for FKHRL1 siRNA (h): sc-37887, FKHRL1 siRNA (m): sc-37888, FKHRL1 shRNA Plasmid (h): sc-37887-SH, FKHRL1 shRNA Plasmid (m): sc-37888-SH, FKHRL1 shRNA (h) Lentiviral Particles: sc-37887-V and FKHRL1 shRNA (m) Lentiviral Particles: sc-37888-V.

FKHRL1 (N-16) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

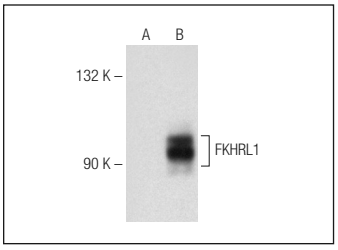
Molecular Weight (predicted) of FKHRL1: 71 kDa.

Molecular Weight (observed) of FKHRL1: 87-99 kDa.

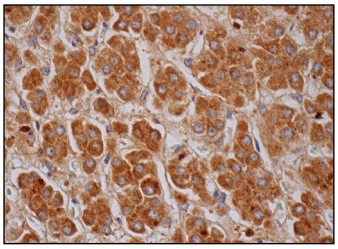
STORAGE

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

DATA



FKHRL1 (N-16): sc-9813. Western blot analysis of FKHRL1 expression in non-transfected: sc-117752 (**A**) and mouse FKHRL1 transfected: sc-178617 (**B**) 293T whole cell lysates.



FKHRL1 (N-16): sc-9813. Immunoperoxidase staining of formalin fixed, paraffin-embedded human adrenal gland tissue showing cytoplasmic staining of glandular cells.

SELECT PRODUCT CITATIONS

1. Ghosh, A.K., et al. 2001. A nucleoprotein complex containing CCAAT/enhancer-binding protein β interacts with an Insulin response sequence in the Insulin-like growth factor-binding protein-1 gene and contributes to Insulin-regulated gene expression. J. Biol. Chem. 276: 8507-8515.
2. Nadal, A., et al. 2002. Down-regulation of the mitochondrial 3-hydroxy-3-methylglutaryl-CoA synthase gene by Insulin: the role of the forkhead transcription factor FKHRL1. Biochem. J. 366: 289-297.
3. Li, L., et al. 2003. Caveolin-1 maintains activated Akt in prostate cancer cells through scaffolding domain binding site interactions with and inhibition of serine/threonine protein phosphatases PP1 and PP2A. Mol. Cell. Biol. 23: 9389-9404.
4. Xiang, Y., et al. 2012. Calorie restriction increases primordial follicle reserve in mature female chemotherapy-treated rats. Gene 493: 77-82.
5. Kornfeld, S.F., et al. 2012. Differential expression of mature microRNAs involved in muscle maintenance of hibernating little brown bats, *Myotis lucifugus:* a model of muscle atrophy resistance. Genomics Proteomics Bioinformatics 10: 295-301.

RESEARCH USE

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

PROTOCOLS

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