

## FKHRL1 (C-18): sc-34895

### 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.

### REFERENCES

- Hillion, J., et al. 1997. AF6q21, a novel partner of the MLL gene in t(6;11)(q21;q23), defines a forkhead transcriptional factor subfamily. *Blood* 90: 3714-3719.
- Anderson, M.J., et al. 1998. Cloning and characterization of three human forkhead genes that comprise an FKHR-like gene subfamily. *Genomics* 47: 187-199.
- Brunet, A., et al. 1999. Akt promotes cell survival by phosphorylating and inhibiting a Forkhead transcription factor. *Cell* 96: 857-868.
- Brunet, A., et al. 2001. Protein kinase SGK mediates survival signals by phosphorylating the forkhead transcription factor FKHRL1 (FOXO3a). *Mol. Cell. Biol.* 21: 952-965.

### CHROMOSOMAL LOCATION

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

### SOURCE

FKHRL1 (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-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-34895 X, 200 µg/0.1 ml.

Blocking peptide available for competition studies, sc-34895 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

### 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.

### APPLICATIONS

FKHRL1 (C-18) 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 (C-18) is also recommended for detection of FKHRL1 in additional species, including equine, canine, 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.

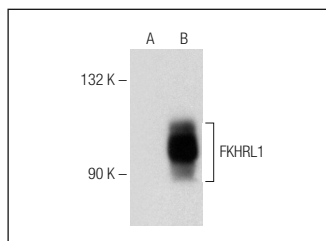
FKHRL1 (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight (predicted) of FKHRL1: 71 kDa.

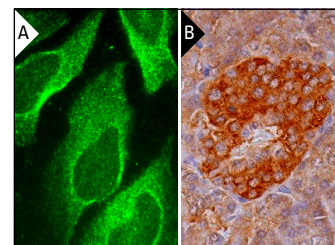
Molecular Weight (observed) of FKHRL1: 87-99 kDa.

Positive Controls: FKHRL1 (m): 293T Lysate: sc-178617.

### DATA



FKHRL1 (C-18): sc-34895. Western blot analysis of FKHRL1 expression in non-transfected: sc-117752 (A) and mouse FKHRL1 transfected: sc-178617 (B) 293T whole cell lysates.



FKHRL1 (C-18): sc-34895. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of exocrine glandular cells and islets of Langerhans (B).

### PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.

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Try **FKHRL1 (D-12): sc-48348**, our highly recommended monoclonal alternative to FKHRL1 (C-18). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **FKHRL1 (D-12): sc-48348**.