

FKHR (H-128): sc-11350



The Power to Question

BACKGROUND

FKHR (for forkhead in rhabdomyosarcoma) and FKHL1 are members of the forkhead family of transcription factors. Transcriptional activation of FKHR proteins is regulated by the serine/threonine kinase Akt1, which phosphorylates FKHL1 and results in FKHL1 associating with 14-3-3 proteins and being retained in the cytoplasm. Induction of apoptosis or withdrawal of growth factors stimulates dephosphorylation and nuclear translocation of FKHR proteins, leading to FKHR-induced gene-specific transcriptional activation. FKHR, also designated forkhead box protein O1A (FOXO1), is an ubiquitously expressed protein that shuttles between the cytoplasm and nucleus. Genetic mutations in FKHR genes, including the t(2;13) and t(1;3) translocations, are commonly found in alveolar rhabdomyosarcomas. These translocations result in the fusion of the amino terminus of Pax-3 or Pax-7, including the paired box and homeodomain DNA-binding domains, with the carboxy-terminus of FKHR, which contains a transcriptional activation domain. The Pax-3/FKHR fusion protein appears to function as an oncogenic transcription factor that enhances the activation of normal Pax-3 target genes.

CHROMOSOMAL LOCATION

Genetic locus: FOXO1 (human) mapping to 13q14.11; Foxo1 (mouse) mapping to 3 C.

SOURCE

FKHR (H-128) is a rabbit polyclonal antibody raised against amino acids 471-598 of FKHR 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.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-11350 X, 200 µg/0.1 ml.

APPLICATIONS

FKHR (H-128) is recommended for detection of FKHR 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FKHR (H-128) is also recommended for detection of FKHR in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for FKHR siRNA (h): sc-35382, FKHR siRNA (m): sc-35383, FKHR shRNA Plasmid (h): sc-35382-SH, FKHR shRNA Plasmid (m): sc-35383-SH, FKHR shRNA (h) Lentiviral Particles: sc-35382-V and FKHR shRNA (m) Lentiviral Particles: sc-35383-V.

FKHR (H-128) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

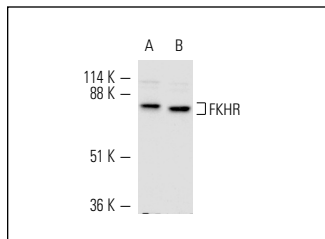
Molecular Weight of FKHR: 80 kDa.

Positive Controls: NIH/3T3 + serum-starved cell lysate: sc-2257.

STORAGE

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

DATA



FKHR (H-128): sc-11350. Western blot analysis of FKHR expression in serum-starved, then serum-treated NIH/3T3 (A) and untreated 3T3-L1 (B) whole cell lysates.

SELECT PRODUCT CITATIONS

- Vander Kooi, B.T., et al. 2003. The three Insulin response sequences in the glucose-6-phosphatase catalytic subunit gene promoter are functionally distinct. *J. Biol. Chem.* 278: 11782-11793.
- Nakae, J., et al. 2003. The forkhead transcription factor Foxo1 regulates adipocyte differentiation. *Dev. Cell* 4: 119-129.
- Briand, O., et al. 2012. The nuclear orphan receptor Nur77 is a lipotoxicity sensor regulating glucose-induced Insulin secretion in pancreatic β-cells. *Mol. Endocrinol.* 26: 399-413.
- Kuo, T., et al. 2012. Genome-wide analysis of glucocorticoid receptor-binding sites in myotubes identifies gene networks modulating Insulin signaling. *Proc. Natl. Acad. Sci. USA* 109: 11160-11165.
- Hasegawa, K., et al. 2012. Necdin controls Foxo1 acetylation in hypothalamic arcuate neurons to modulate the thyroid axis. *J. Neurosci.* 32: 5562-5572.
- Xia, N., et al. 2013. Role of SIRT1 and FOXO factors in eNOS transcriptional activation by resveratrol. *Nitric Oxide.* 32: 29-35.
- Liu, L., et al. 2013. Cyclin-dependent kinase 4 phosphorylates and positively regulates PAX3-FOXO1 in human alveolar rhabdomyosarcoma cells. *PLoS ONE.* 8: e58193.

RESEARCH USE

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

MONOS
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Try **FKHR (C-9): sc-374427** or **FKHR (A-6): sc-514610**, our highly recommended monoclonal alternatives to FKHR (H-128). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **FKHR (C-9): sc-374427**.