

## FKHR (C-20): sc-9808

### BACKGROUND

The transcription factor forkhead in rhabdomyosarcoma (FKHR), which is inhibited by Insulin and IGF-1, enhances transcription. FKHR has been implicated in alveolar rhabdomyosarcoma, a soft tissue tumor wherein a chromosomal translocation [t(2;12)(q35;q14)] occurs between the FKHR and PAX3 genes, resulting in a novel chimeric protein with abnormal levels of expression. FKHR becomes phosphorylated at Ser 319, Ser 256 and Thr 24 by protein kinase B (PKB) in a phosphoinositide 3-(PI3) kinase/Akt dependent pathway, resulting in the inactivation and subsequent nuclear exit of FKHR. In addition, FKHR becomes phosphorylated at Ser 329, also resulting in decreased FKHR activity and diminished nuclear FKHR concentration. However, phosphorylation of FKHR at Ser 329 is not mediated by a PI3-kinase-dependent pathway, but by an alternate mechanism. Dual-specificity tyrosine-phosphorylated and regulated kinase 1A (DYRK1A), which co-localizes to the same region of the nucleus as FKHR, specifically phosphorylates FKHR at Ser 329 in rabbit skeletal muscle.

### CHROMOSOMAL LOCATION

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

### SOURCE

FKHR (C-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus 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.

Blocking peptide available for competition studies, sc-9808 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-9808 X, 200 µg/0.1 ml.

### APPLICATIONS

FKHR (C-20) 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 (C-20) is also recommended for detection of FKHR in additional species, including equine, canine, bovine, porcine and avian.

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.

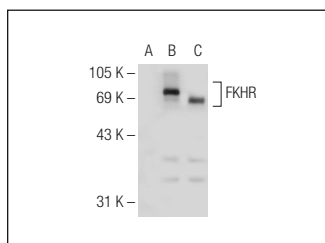
FKHR (C-20) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of FKHR: 80 kDa.

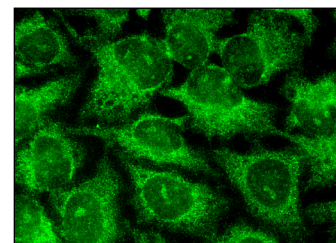
### RESEARCH USE

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

### DATA



FKHR (C-20): sc-9808. Western blot analysis of FKHR expression in non-transfected 293: sc-110760 (A), mouse FKHR transfected 293: sc-178616 (B) and TE 671 (C) whole cell lysates.



FKHR (C-20): sc-9808. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization.

### SELECT PRODUCT CITATIONS

- Daly, C., et al. 2006. Angiotensin-2 functions as an autocrine protective factor in stressed endothelial cells. *Proc. Natl. Acad. Sci. USA* 103: 15491-15496.
- Morse, E., et al. 2009. PPAR $\alpha$  ligands cause lymphocyte depletion and cell cycle block and this is associated with augmented TRB3 and reduced Cyclin B1 expression. *Mol. Immunol.* 46: 3454-3461.
- Hecker, R.M., et al. 2010. p21 downregulation is an important component of PAX3/FKHR oncogenicity and its reactivation by HDAC inhibitors enhances combination treatment. *Oncogene* 29: 3942-3952.
- Myatt, S.S., et al. 2010. Definition of microRNAs that repress expression of the tumor suppressor gene FOXO1 in endometrial cancer. *Cancer Res.* 70: 367-377.
- Stephen, S., et al. 2010. Repression of FOXO1 expression by microRNAs in endometrial cancer. *Cancer Res.* 70: 367-377.
- Zhu, H.J., et al. 2012. Impaired N-cadherin-mediated adhesion increases the risk of inducible ventricular arrhythmias in isolated rat hearts. *Sci. Res. Essays* 7: 2983-2991.
- Abraham, J., et al. 2014. Lineage of origin in rhabdomyosarcoma informs pharmacological response. *Genes Dev.* 28: 1578-1591.

### STORAGE

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



Try **FKHR (C-9): sc-374427** or **FKHR (A-6): sc-514610**, our highly recommended monoclonal alternatives to FKHR (C-20). Also, for AC, HRP, FITC, PE, Alexa Fluor<sup>®</sup> 488 and Alexa Fluor<sup>®</sup> 647 conjugates, see **FKHR (C-9): sc-374427**.