SANTA CRUZ BIOTECHNOLOGY, INC.

FKHR (C-9): sc-374427

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

FKHR (for forkhead in rhabdomyosarcoma) and FKHRL1 are members of the forkhead family of transcription factors. Transcriptional activation of FKHR proteins is regulated by the serine/threonine kinase Akt1, which phosphorylates FKHRL1 and results in FKHRL1 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 (C-9) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 615-653 near the C-terminus of FKHR of human origin.

PRODUCT

Each vial contains 200 µg IgG_1 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-374427 X, 200 µg/0.1 ml.

FKHR (C-9) is available conjugated to agarose (sc-374427 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-374427 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-374427 PE), fluorescein (sc-374427 FITC), Alexa Fluor® 488 (sc-374427 AF488), Alexa Fluor® 546 (sc-374427 AF546), Alexa Fluor® 594 (sc-374427 AF594) or Alexa Fluor® 647 (sc-374427 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-374427 AF680) or Alexa Fluor® 790 (sc-374427 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-374427 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.

PROTOCOLS

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

APPLICATIONS

FKHR (C-9) is recommended for detection of FKHR 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).

FKHR (C-9) is also recommended for detection of FKHR in additional species, including equine, canine, bovine, porcine and avian.

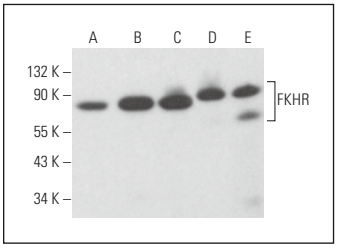
Suitable for use as control antibody for FKHR siRNA (h): sc-35382, FKHR siRNA (m): sc-35383, FKHR shRNA Plasmid (h): sc-35382-SH, FKHR shRNA Plasmid (m): sc-35383-SH, FKHR shRNA (h) Lentiviral Particles: sc-35382-V and FKHR shRNA (m) Lentiviral Particles: sc-35383-V.

FKHR (C-9) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

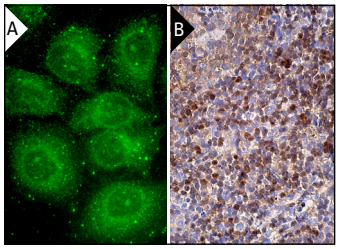
Molecular Weight of FKHR: 80 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, U-698-M whole cell lysate: sc-364799 or Daudi cell lysate: sc-2415.

DATA



FKHR (C-9): sc-374427. Western blot analysis of FKHR expression in HeLa (**A**), U-698-M (**B**), Daudi (**C**), F9 (**D**) and WEHI-231 (**E**) whole cell lysates.



FKHR (C-9): sc-374427. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic localization (**A**). Immunoperoxidase staining of formalin fixed, paraffin-embedded human tonsil tissue showing nuclear and cytoplasmic staining of cells in germinal and non-germinal centers (**B**).

SELECT PRODUCT CITATIONS

1. Chae, Y.C., et al. 2014. Inhibition of FOXO1 acetylation by INHAT subunit SET/TAF-Iβ induces p21 transcription. FEBS Lett. 588: 2867-2873.
2. Li, J.R., et al. 2020. Endoplasmic reticulum stress and autophagy contributed to cadmium nephrotoxicity in HK-2 cells and sprague-dawley rats. Food Chem. Toxicol. 146: 111828.
3. Ferrer, B., et al. 2021. Chronic exposure to methylmercury disrupts ghrelin actions in C57BL/6J mice. Food Chem. Toxicol. 147: 111918.

RESEARCH USE

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