

FKHRL1 (D-12): sc-48348



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 (D-12) is a mouse monoclonal antibody raised against amino acids 329-472 of FKHRL1 of human origin.

PRODUCT

Each vial contains 200 µg IgG₁ 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-48348 X, 200 µg/0.1 ml.

FKHRL1 (D-12) is available conjugated to agarose (sc-48348 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-48348 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-48348 PE), fluorescein (sc-48348 FITC), Alexa Fluor® 488 (sc-48348 AF488), Alexa Fluor® 546 (sc-48348 AF546), Alexa Fluor® 594 (sc-48348 AF594) or Alexa Fluor® 647 (sc-48348 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-48348 AF680) or Alexa Fluor® 790 (sc-48348 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

FKHRL1 (D-12) is recommended for detection of FKHRL1 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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 (D-12) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

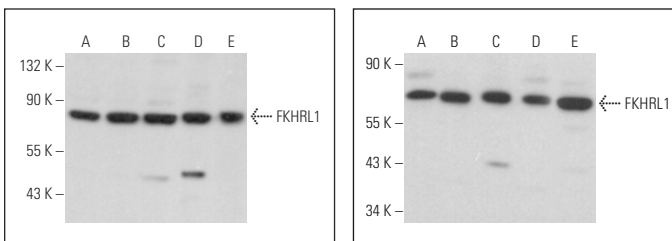
Molecular Weight (predicted) of FKHRL1: 71 kDa.

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 (D-12): sc-48348. Western blot analysis of FKHRL1 expression in MDA-MB-231 (A), NCI-H929 (B) and TE671 (C) whole cell lysates, HeLa nuclear extract (D) and human adrenal gland tissue extract (E).

FKHRL1 (D-12): sc-48348. Western blot analysis of FKHRL1 expression in MDA-MB-231 (A), A-673 (B), RD (C), SJRH30 (D) and TF-1 (E) whole cell lysates.

SELECT PRODUCT CITATIONS

- Ogiwara, H., et al. 2011. Histone acetylation by CBP and p300 at double-strand break sites facilitates SWI/SNF chromatin remodeling and the recruitment of non-homologous end joining factors. *Oncogene* 30: 2135-2146.
- Peng, X.L., et al. 2017. MyoD- and FOXO3-mediated hotspot interaction orchestrates super-enhancer activity during myogenic differentiation. *Nucleic Acids Res.* 45: 8785-8805.
- Erkenbrack, E.M., et al. 2018. The mammalian decidual cell evolved from a cellular stress response. *PLoS Biol.* 16: e2005594.
- Li, C., et al. 2019. (Pro)renin receptor contributes to renal mitochondria dysfunction, apoptosis and fibrosis in diabetic mice. *Sci. Rep.* 9: 11667.
- Hoppstädter, J., et al. 2020. The glucocorticoid-induced leucine zipper mediates statin-induced muscle damage. *FASEB J.* 34: 4684-4701.
- Chen, L., et al. 2020. Imperatorin alleviates cancer cachexia and prevents muscle wasting via directly inhibiting Stat3. *Pharmacol. Res.* 158: 104871.
- Albamonte, M.I., et al. 2020. PTEN and FOXO3 expression in the prenatal and postnatal human ovary. *J. Assist. Reprod. Genet.* 37: 1613-1622.
- Guo, Y., et al. 2020. Spermine synthase and MYC cooperate to maintain colorectal cancer cell survival by repressing Bim expression. *Nat. Commun.* 11: 3243.
- Di Matteo, S., et al. 2021. Metformin exerts anti-cancerogenic effects and reverses epithelial-to-mesenchymal transition trait in primary human intrahepatic cholangiocarcinoma cells. *Sci. Rep.* 11: 2557.

RESEARCH USE

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

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