

FOXX1 (G-4): sc-373810

BACKGROUND

The FOX family of transcription factors share a common DNA binding domain termed a winged-helix or forkhead domain. Many FOX proteins play important roles in development, metabolism, cancer and aging. In skeletal muscles, undifferentiated myogenic stem cells (satellite cells) can mobilize to regenerate myofibers in response to injury. FOXX1 is expressed in these cells and regulates cell cycle progression through an interaction with its downstream target the cyclin-dependent kinase inhibitor p21^{CIP}. Loss of FOXX1 in mice results in growth retardation and a severe impairment in skeletal muscle regeneration following injury. FOXX1 also shows expression in immature tissues of brain, eye, heart, lung and thymus. It also is predominantly expressed in many malignant tissues, such as tumors of the brain, colon and lymph node.

CHROMOSOMAL LOCATION

Genetic locus: FOXX1 (human) mapping to 7p22.1.

SOURCE

FOXX1 (G-4) is a mouse monoclonal antibody raised against amino acids 472-611 mapping near the C-terminus of FOXX1 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-373810 X, 200 µg/0.1 ml.

FOXX1 (G-4) is available conjugated to agarose (sc-373810 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-373810 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-373810 PE), fluorescein (sc-373810 FITC), Alexa Fluor® 488 (sc-373810 AF488), Alexa Fluor® 546 (sc-373810 AF546), Alexa Fluor® 594 (sc-373810 AF594) or Alexa Fluor® 647 (sc-373810 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-373810 AF680) or Alexa Fluor® 790 (sc-373810 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

FOXX1 (G-4) is recommended for detection of forkhead box protein K1 of 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 FOXX1 siRNA (h): sc-60657, FOXX1 shRNA Plasmid (h): sc-60657-SH and FOXX1 shRNA (h) Lentiviral Particles: sc-60657-V.

FOXX1 (G-4) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

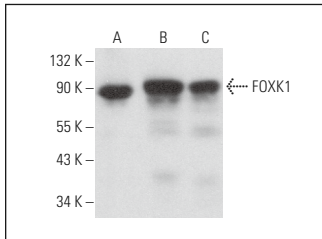
Molecular Weight of FOXX1: 90 kDa.

Positive Controls: A-673 cell lysate: sc-2414, HeLa nuclear extract: sc-2120 or A-431 nuclear extract: sc-2201.

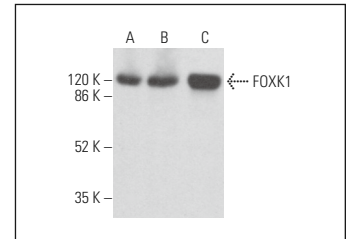
STORAGE

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

DATA



FOXX1 (G-4): sc-373810. Western blot analysis of FOXX1 expression in HeLa nuclear extract (A) and Hep G2 (B) and AN3 CA (C) whole cell lysates.



FOXX1 (G-4): sc-373810. Western blot analysis of FOXX1 expression in HeLa (A) and A-431 (B) nuclear extracts and A-673 whole cell lysate (C). Detection reagent used: m-IgGκ BPHRP: sc-516102.

SELECT PRODUCT CITATIONS

- Wu, Y., et al. 2016. Knockdown of FOXX1 alone or in combination with apoptosis-inducing 5-FU inhibits cell growth in colorectal cancer. *Oncol. Rep.* 36: 2151-2159.
- Wu, M., et al. 2016. FOXX1 interaction with FHL2 promotes proliferation, invasion and metastasis in colorectal cancer. *Oncogenesis* 5: e271.
- Papachristou, E.K., et al. 2018. A quantitative mass spectrometry-based approach to monitor the dynamics of endogenous chromatin-associated protein complexes. *Nat. Commun.* 9: 2311.
- Campagne, A., et al. 2019. BAP1 complex promotes transcription by opposing PRC1-mediated H2A ubiquitylation. *Nat. Commun.* 10: 348.
- Yang, H., et al. 2019. MicroRNA-652 suppresses malignant phenotypes in glioblastoma multiforme via FOXX1-mediated Akt/mTOR signaling pathway. *Onco Targets Ther.* 12: 5563-5575.
- Zhang, C., et al. 2022. Long noncoding RNASEH1-AS1 exacerbates the progression of non-small cell lung cancer by acting as a ceRNA to regulate microRNA-516a-5p/FOXX1 and thereby activating the Wnt/β-catenin signaling pathway. *Cancer Med.* 11: 1589-1604.
- Tian, M., et al. 2023. JLP/Foxk1/N-cadherin axis fosters a partial epithelial-mesenchymal transition state in epithelial tubular cells. *iScience* 26: 106396.
- Masclef, L., et al. 2024. O-GlcNAcylation of FOXX1 orchestrates the E2F pathway and promotes oncogenesis. *bioRxiv*. E-published.

RESEARCH USE

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

PROTOCOLS

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