FOXC2 (D-8): sc-515472

BACKGROUND

FOXC2 is a member of forkhead/winged helix transcription factor family, whose members serve as key regulators in embryogenesis and cell differentiation. FOXC2 functions as a key regulator of adipocyte metabolism by increasing the sensitivity of the β-adrenergic-cAMP-protein kinase A (PKA) signaling pathway through alteration of adipocyte PKA holoenzyme composition. Increased FOXC2 levels, induced by high fat diet, seem to counteract most of the symptoms associated with obesity. FOXC2 expression is also associated with the early stage of chondrogenic differentiation both in vivo and in vitro. FOXC2 haploinsufficiency results in Lymphedema-distichiasis syndrome (LD), an autosomal dominant disorder that classically presents as lymphedema of the limbs, and double rows of eyelashes (distichiasis). Mutant mice null for FOXC2 show defects in axial and cranial skeletogenesis, suggesting a requirement of FOXC2 for skeletal tissue development. FOXC2 interacts with FOXC1 in the Notch signaling pathway and in kidney and heart development.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: FOXC2 (human) mapping to 16q24.1; Foxc2 (mouse) mapping to 8 E1.

SOURCE

FOXC2 (D-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 333-357 within an internal region of FOXC2 of human origin.

PRODUCT

Each vial contains 200 μg IgG2b 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-515472 X, 200 μg/0.1 ml.

Blocking peptide available for competition studies, sc-515472 P, (100 μg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

RESEARCH USE

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

APPLICATIONS

FOXC2 (D-8) is recommended for detection of FOXC2 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 FOXC2 siRNA (h): sc-43767, FOXC2 siRNA (m): sc-45366, FOXC2 shRNA Plasmid (h): sc-43767-SH, FOXC2 shRNA Plasmid (m): sc-45366-SH, FOXC2 shRNA (h) Lentiviral Particles: sc-43767-V and FOXC2 shRNA (m) Lentiviral Particles: sc-45368-V.

FOXC2 (D-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of FOXC2: 62 kDa.

Positive Controls: RAW 264.7 whole cell lysate: sc-2211, Jurkat whole cell lysate: sc-2204 or U-87 MG cell lysate: sc-2411.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
1) Western Blotting: use m-IgG κ-HRP: sc-516102 or m-IgG κ-Mounting Medium: sc-359850.
2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).
3) Immunofluorescence: use m-IgG κ-FITC: sc-516140 or m-IgG κ-Blocking Reagent:

DATA

FOXC2 (D-8) sc-515472. Western blot analysis of FOXC2 expression in U-87 MG (A), Jurkat (B), C2C12 (C), RAW 264.7 (D) and KNIRK (E) whole cell lysates.

SELECT PRODUCT CITATIONS


STORAGE

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