

DUX4 (G-18): sc-79926

BACKGROUND

The double homeobox (DUX) proteins are encoded by 3.3-kilobase repeats found throughout the human genome. The DUX family includes DUX1, DUX2, DUX3, DUX4 and DUX5. Each of these family members, excluding DUX2, contains two homeobox domains. DUX2 contains only one homeobox domain. DUX1 and DUX5 are identical to one another and they share 98% identity with DUX3 and approximately 70% identity with DUX2. The genes encoding DUX5 and DUX3 both contain additional start sites that result in N-terminal extended isoforms. The homeodomains found in DUX5 and DUX1 are similar to those found in Pax-3, Pax-7, OTX1 and OTX2. DUX4, also known as DUX10, is capable of forming homodimers. In addition, the gene encoding DUX4 maps within the D4Z4 repeat unit that has been implicated in Facioscapulothumeral muscular dystrophy (FSHD).

REFERENCES

- Ding, H., et al. 1998. Characterization of a double homeodomain protein (DUX) encoded by a cDNA homologous to 3.3 kb dispersed repeated elements. *Hum. Mol. Genet.* 7: 1681-1694.
- Gabriëls, J., et al. 1999. Nucleotide sequence of the partially deleted D4Z4 locus in a patient with FSHD identifies a putative gene within each 3.3 kb element. *Gene* 236: 25-32.
- Beckers, M., et al. 2001. Active genes in junk DNA? Characterization of DUX genes embedded within 3.3 kb repeated elements. *Gene* 264: 51-57.
- Ostlund, C., et al. 2005. Intracellular trafficking and dynamics of double homeodomain proteins. *Biochemistry* 44: 2378-2384.
- Kawamura-Saito, M., et al. 2006. Fusion between CIC and DUX4 upregulates PEA3 family genes in Ewing-like sarcomas with t(4;19)(q35;q13) translocation. *Hum Mol Genet.* 15: 2125-2137.
- Kowaljow, V., et al. 2007. The DUX4 gene at the FSHD1A locus encodes a pro-apoptotic protein. *Neuromuscul. Disord.* 17: 611-623.

CHROMOSOMAL LOCATION

Genetic locus: DUX4 (human) mapping to 4q35.

SOURCE

DUX4 (G-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of DUX4 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-79926 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-79926 X, 200 µg/0.1 ml.

RESEARCH USE

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

APPLICATIONS

DUX4 (G-18) is recommended for detection of DUX4 of 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).

Suitable for use as control antibody for DUX4 siRNA (h): sc-62245, DUX4 shRNA Plasmid (h): sc-62245-SH and DUX4 shRNA (h) Lentiviral Particles: sc-62245-V.

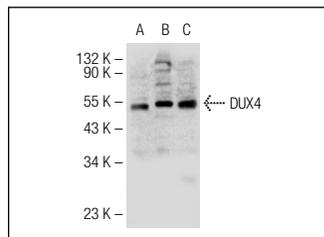
DUX4 (G-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of DUX4 monomer: 38 kDa.

Molecular Weight of DUX4 homodimer: 75 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200, PC-3 cell lysate: sc-2220 or MIA PaCa-2 cell lysate: sc-2285.

DATA



DUX4 (G-18): sc-79926. Western blot analysis of DUX4 expression in HeLa (A), PC-3 (B) and MIA PaCa-2 (C) whole cell lysates.

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 or our catalog for detailed protocols and support products.



Try **DUX4 (C-2): sc-376490**, our highly recommended monoclonal alternative to DUX4 (G-18).