BACKGROUND

Osterix (OSX) is a zinc finger-containing transcriptional activator that is distinctly expressed in all developing bones and is important for osteoblast differentiation. In particular, OSX is implicated in the differentiation of osteoblasts, which are the specialized cells of bone formation. OSX is a nuclear protein that binds to GC box promoters elements and activates mRNA synthesis from genes containing functional recognition sites. The periosteal and mesenchymal cells of the membranous skeletal elements of OSX-mice fail to differentiate into osteoblasts. Subsequently, the mesenchymal cells of OSX-mice fail to deposit bone matrix and do not form bone. Cox-2 deficiency correlates with a decrease in OSX expression, suggesting that Cox-2 may induce OSX to mediate skeletal repair.

REFERENCES


CHROMOSOMAL LOCATION

Genetic locus: SP7 (human) mapping to 12q13.13; Sp7 (mouse) mapping to 15 F3.

SOURCE

OSX (E-6) is a mouse monoclonal antibody raised against amino acids 172-268 mapping within an internal region of OSX of human origin.

PRODUCT

Each vial contains 200 µg IgGκ light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

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

APPLICATIONS

OSX (E-6) is recommended for detection of OSX 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 OSX siRNA (h): sc-43984, OSX siRNA (m): sc-45909, OSX shRNA Plasmid (h): sc-43984-SH, OSX shRNA Plasmid (m): sc-45909-SH, OSX shRNA (h) Lentiviral Particles: sc-43984-V and OSX shRNA (m) Lentiviral Particles: sc-45909-V.

Molecular Weight of OSX: 45 kDa.

Positive Controls: TF-1 cell lysate: sc-2412 or HOS cell lysate: sc-2275.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:

DATA

OSX (E-6): sc-393060. Western blot analysis of OSX expression in TF-1 (A) and HOS (B) whole cell lysates.

DATA

OSX (E-6): sc-393060. Western blot analysis of OSX expression in TF-1 (A) and HOS (B) whole cell lysates.

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.

CONJUGATES

See OSX (F-3): sc-393325 for OSX antibody conjugates, including AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647.