

# Msx-1 (F-22): sc-133797

## BACKGROUND

Msx homeobox genes encode for transcription factors that control morphogenesis and are expressed at sites of epithelial-mesenchymal interaction during embryogenesis, such as the tooth. Two of these genes, Msx-1 and Msx-2, are key factors for the development of tooth and craniofacial skeleton. Msx-1 also downregulates a master gene of skeletal cells differentiation. Msx-1 and Msx-2 contribute to the initial patterning of dentition as well as playing a pivotal role in terminal cell differentiation. In addition, Msx-1 and Msx-2 are expressed in the epidermis, hair follicles and fibroblasts of the developing fetal skin. In adult skin, Msx-1 and Msx-2 expression is confined to epithelially derived structures. Msx-2 is detected as a diffuse cytoplasmic signal in fetal epidermis and portions of the hair follicle and dermis, but is localized to the nucleus in the adult epidermis. Msx-1 and Msx-2 are also expressed during critical developmental stages of neural tube and neural crest, suggesting that these genes play an important role in organogenesis.

## REFERENCES

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- Blin-Wakkach, C., Lezot, F., Ghouli-Mazgar, S., Hotton, D., Monteiro, S., Teillaud, C., Pibouin, L., Orestes-Cardoso, S., Papagerakis, P., Macdougall, M., Robert, B. and Berdal, A. 2001. Endogenous Msx1 antisense transcript: *In vivo* and *in vitro* evidences, structure, and potential involvement in skeleton development in mammals. *Proc. Natl. Acad. Sci. USA* 98: 7336-7341.
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## CHROMOSOMAL LOCATION

Genetic locus: MSX1 (human) mapping to 4p16.2; Msx1 (mouse) mapping to 5 B3.

## SOURCE

Msx-1 (F-22) is a Protein A purified rabbit polyclonal antibody raised against an N-terminal region of synthetic Msx-1 of human origin.

## PRODUCT

Each vial contains 100 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide, 0.1% gelatin and < 0.02% sucrose.

## APPLICATIONS

Msx-1 (F-22) is recommended for detection of Msx-1 of mouse, rat, human and bovine and canine 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)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for Msx-1 siRNA (h): sc-43945, Msx-1 siRNA (m): sc-149665, Msx-1 shRNA Plasmid (h): sc-43945-SH, Msx-1 shRNA Plasmid (m): sc-149665-SH, Msx-1 shRNA (h) Lentiviral Particles: sc-43945-V and Msx-1 shRNA (m) Lentiviral Particles: sc-149665-V.

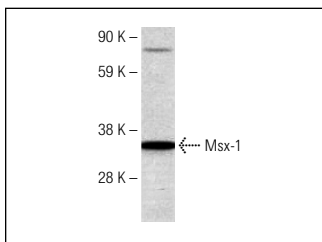
Molecular Weight of Msx-1: 31 kDa.

Positive Controls: SP2/0 whole cell lysate: sc-364795.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml).

## DATA



Msx-1 (F-22): sc-133797. Western blot analysis of Msx-1 expression in SP2/0 whole cell lysate.

## STORAGE

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

## RESEARCH USE

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



Try **Msx-1 (5D11D11): sc-517211**, our highly recommended monoclonal alternative to Msx-1 (F-22).