

PRODUCT INFORMATION

Product name : MSX1 antibody

Product type : Primary antibodies

Description : Rabbit polyclonal to MSX1

Immunogen : 3 synthetic peptides (human) conjugated to KLH

Reacts with : Hu, Ms

Tested applications : ELISA, WB and IF

GENE INFORMATION

Gene Symbol : MSX1

Gene Name : msh homeobox 1

Ensembl ID : ENSG00000163132

Entrez GeneID : 4487

GenBank Accession number : M97676

Omim ID : 142983

Swiss-Prot : P28360

Molecular weight of MSX1 : 30.9 kDa

Function : Acts as a transcriptional repressor. May play a role in limb-pattern formation. Acts in craniofacial development and specifically in odontogenesis. Expression in the developing nail bed mesenchyme is important for nail plate thickness and integrity.

Expected subcellular localization : Nucleus

Expected tissue specificity : Expressed in the developing nail bed mesenchyme

Summary : This gene encodes a member of the muscle segment homeobox gene family. The encoded protein functions as a transcriptional repressor during embryogenesis through interactions with components of the core transcription complex and other homeoproteins. It may also have roles in limb-pattern formation, craniofacial development, particularly odontogenesis, and tumor growth inhibition. Mutations in this gene, which was once known as homeobox 7, have been associated with nonsyndromic cleft lip with or without cleft palate 5, Witkop syndrome, Wolf-Hirschorn syndrome, and autosomal dominant hypodontia. [provided by RefSeq]

APPLICATION NOTE

Recommended dilution :

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A titer of 1/2000 has been determined. Appropriate specificity controls were run.
- **WB:** 1/1000.
- **IF:** 1/500.

Optimal dilutions/concentration should be determined by the end user.

Raised in : Rabbit

Clonality : Polyclonal

Isotype : IgG

Purity : Purified antibody

Storage buffer : 0.5 X PBS, containing a final concentration of 50% Glycerol, 0.1% BSA and 0.01% Thimerosal.

Form : Liquid

Storage instruction : Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles

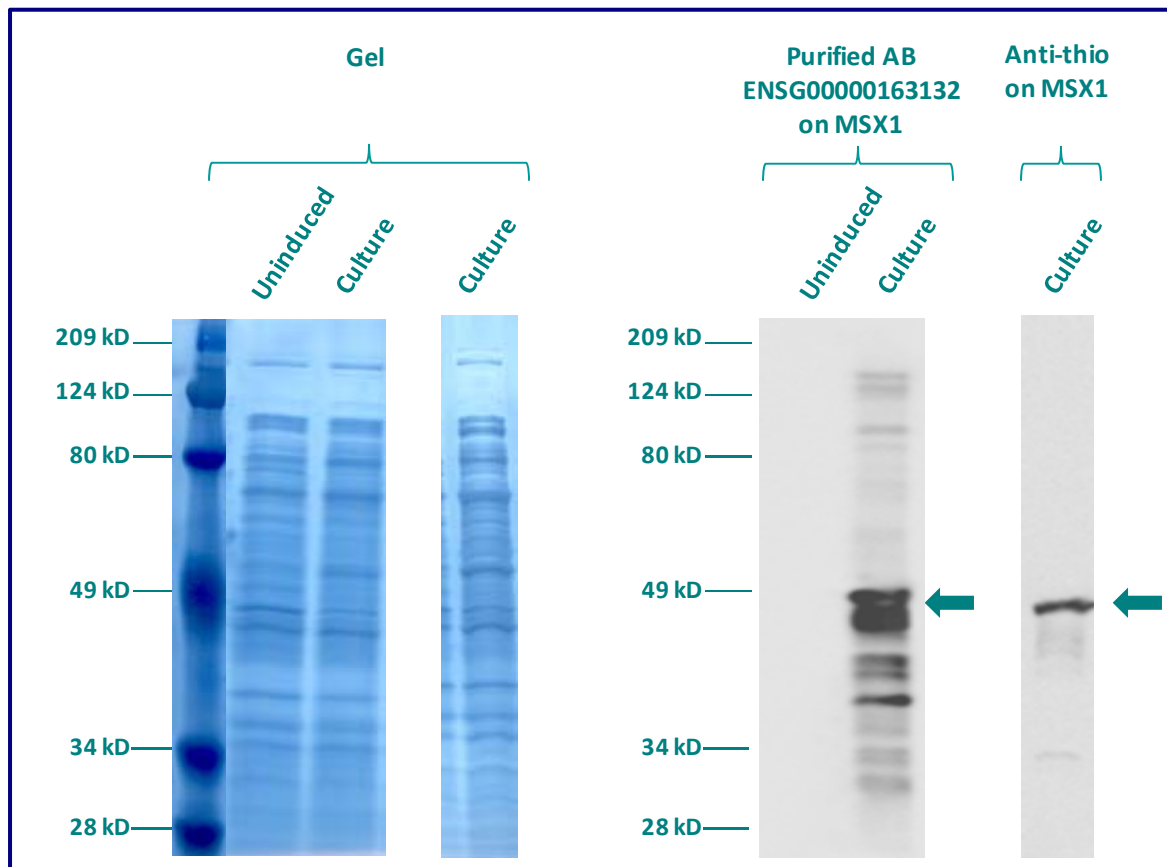
WESTERN BLOT ON RECOMBINANT PROTEIN

The purified antibody ENSG00000163132 has been tested at 1/2000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells).

An anti-thio (positive control) has been tested at 1/5000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells) as a positive control.

Plasmid name : pBAD-DEST49.

Molecular weight of MSX1 : 44.9kDa (30.9kDa + another 14kDa for the tag).



Gel concentration: 10%

Blocking: in 5% non-fat milk-PBST solution

1st Antibody: The antibodies are diluted in blocking buffer.

- Dilute the purified antibody ENSG00000163132 at 1:1000
- Dilute the anti-thio at 1:5000

60 minutes of incubation

2nd Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Rabbit IgG HRP conjugated at 1/10000

60 minutes of incubation

IMMUNOFLUORESCENCE ANALYSIS

Immunofluorescence analysis of Homeobox protein MSX-1 (MSX1) expression in 6 cells lines (HELA, 293T/17, Capan-2, SAOS-2, SH-SY5Y, Skin 3,44). The purified Antibody ENSG00000163132 has been tested at 1/1000.

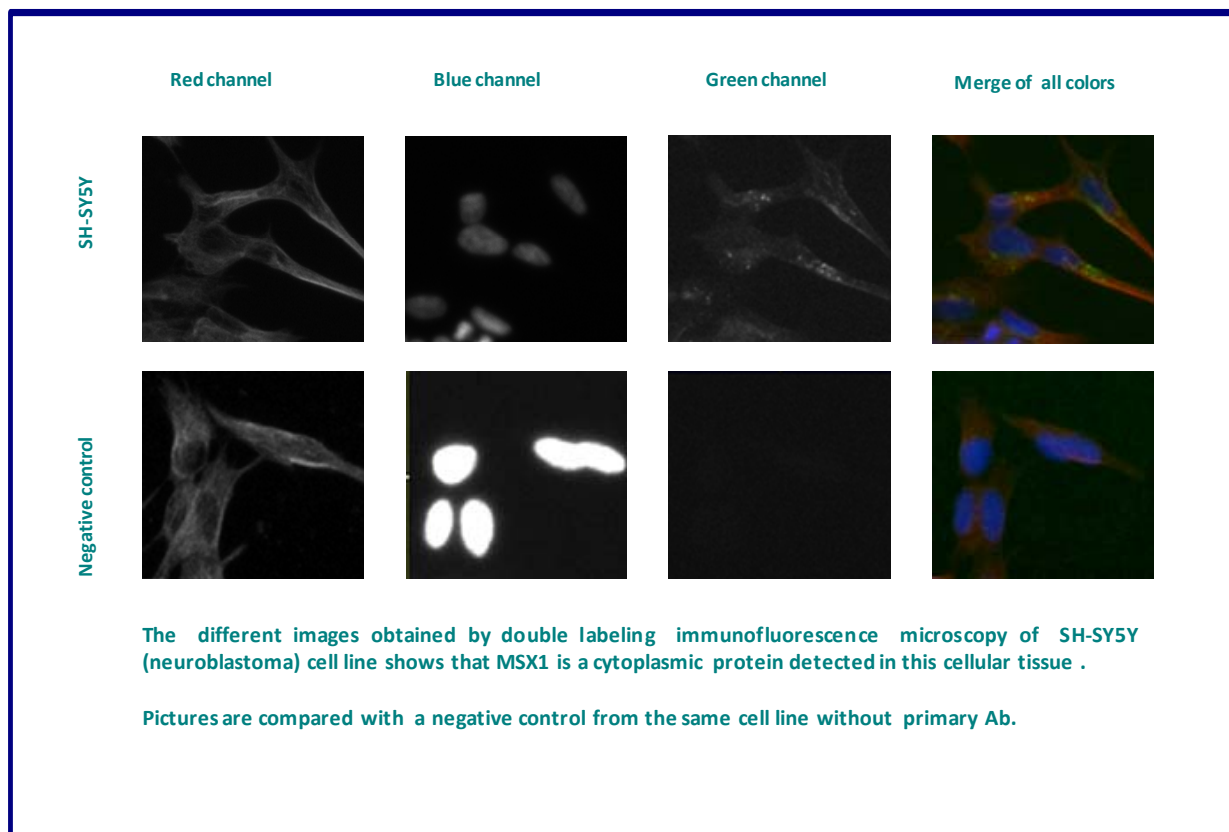
Red staining : cytoskeleton (microtubules/ α -tubuline)

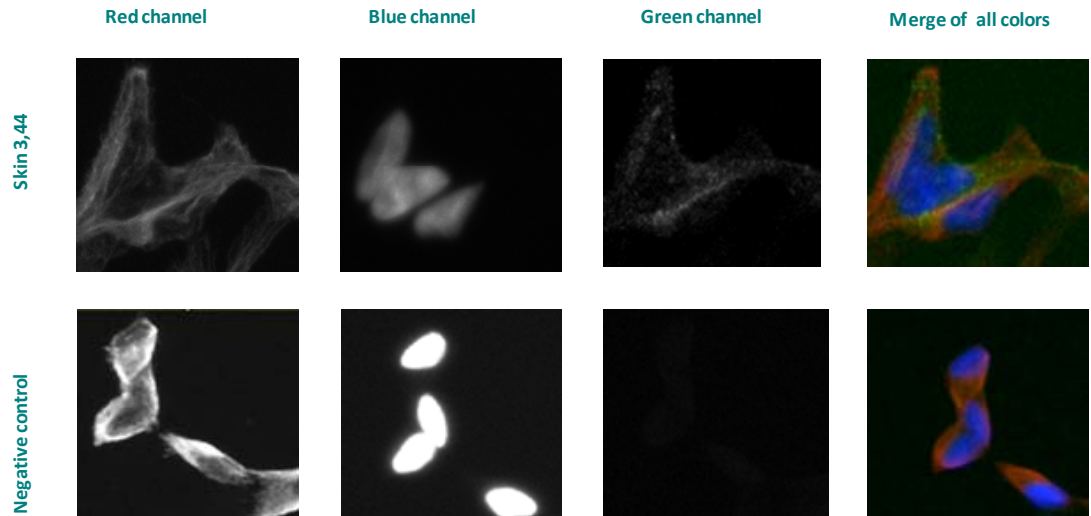
Blue staining : nucleus (Hoechst)

Green staining : anti- MSX1 antibody (purified)

Expected subcellular location : Nucleus

Expected tissue specificity : Expressed in the developing nail bed mesenchyme





The different images obtained by double labeling immunofluorescence microscopy of Skin 3,44 (melanoma) cell line shows that MSX1 is a cytoplasmic protein detected in this cellular tissue .

Pictures are compared with a negative control from the same cell line without primary Ab.

Remaining cell lines tested gave a positive result with a cytoplasmic distribution.