

PRODUCT INFORMATION

Product name : MAFA antibody

Product type : Primary antibodies

Description : Rabbit polyclonal to MAFA

Immunogen : 3 synthetic peptides (human) conjugated to KLH

Reacts with : Hu, Ms

Tested applications : ELISA, WB and IF

GENE INFORMATION

Gene Symbol : MAFA

Gene Name : v-maf musculoaponeurotic fibrosarcoma oncogene homolog A (avian)

Ensembl ID : ENSG00000182759

Entrez GeneID : 389692

GenBank Accession number : AY083269

Omim ID : 610303

Swiss-Prot : Q8NHW3

Molecular weight of MAFA : 36.8 kDa

Function : Acts as a transcriptional factor. Specifically binds the insulin enhancer element RIPE3b and activates insulin gene expression. Cooperates synergistically with NEUROD1 and PDX1. Phosphorylation by GSK3 increases its transcriptional activity and is required for its oncogenic activity. Involved either as an oncogene or as a tumor suppressor, depending on the cell context.

Expected subcellular localization : Nucleus

Summary : MAFA is a transcription factor that binds RIPE3b, a conserved enhancer element that regulates pancreatic beta cell-specific expression of the insulin gene (INS; MIM 176730) (Olbrot et al., 2002 [PubMed 12011435]).[supplied by OMIM]

APPLICATION NOTE

Recommended dilution :

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A titer of 1/10000 has been determined. Appropriate specificity controls were run.
- **WB:** 1/5000.
- **IF:** 1/1000.

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

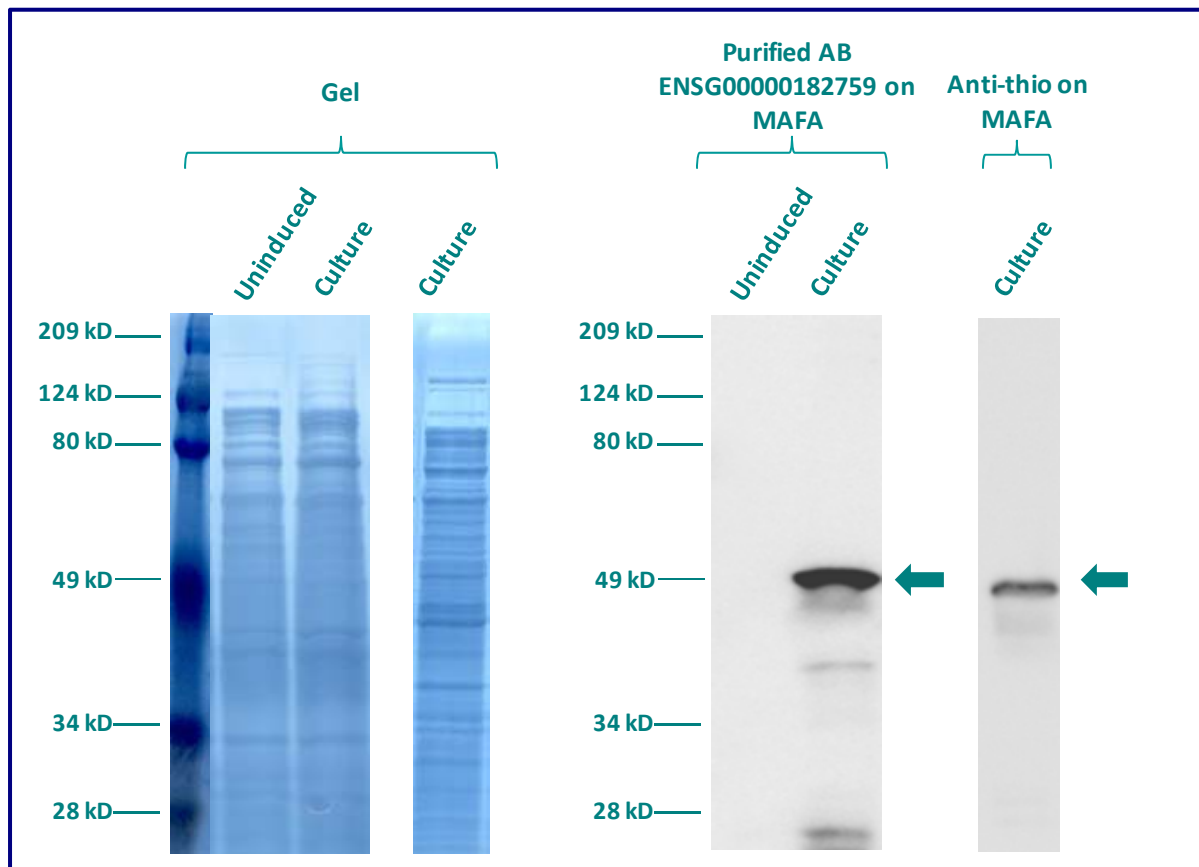
WESTERN BLOT ON RECOMBINANT PROTEIN

The purified antibody ENSG00000182759 has been tested at 1/5000 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 MAFA : 50.8kDa (36.8kDa + 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 ENSG00000182759 at 1:5000
- 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 Transcription factor MafA (MAFA) expression in 6 cells lines (HELA, 293T/17, Capan-2, SAOS-2, SH-SY5Y, Skin 3,44). The purified Antibody ENSG00000182759 has been tested at 1/5000.

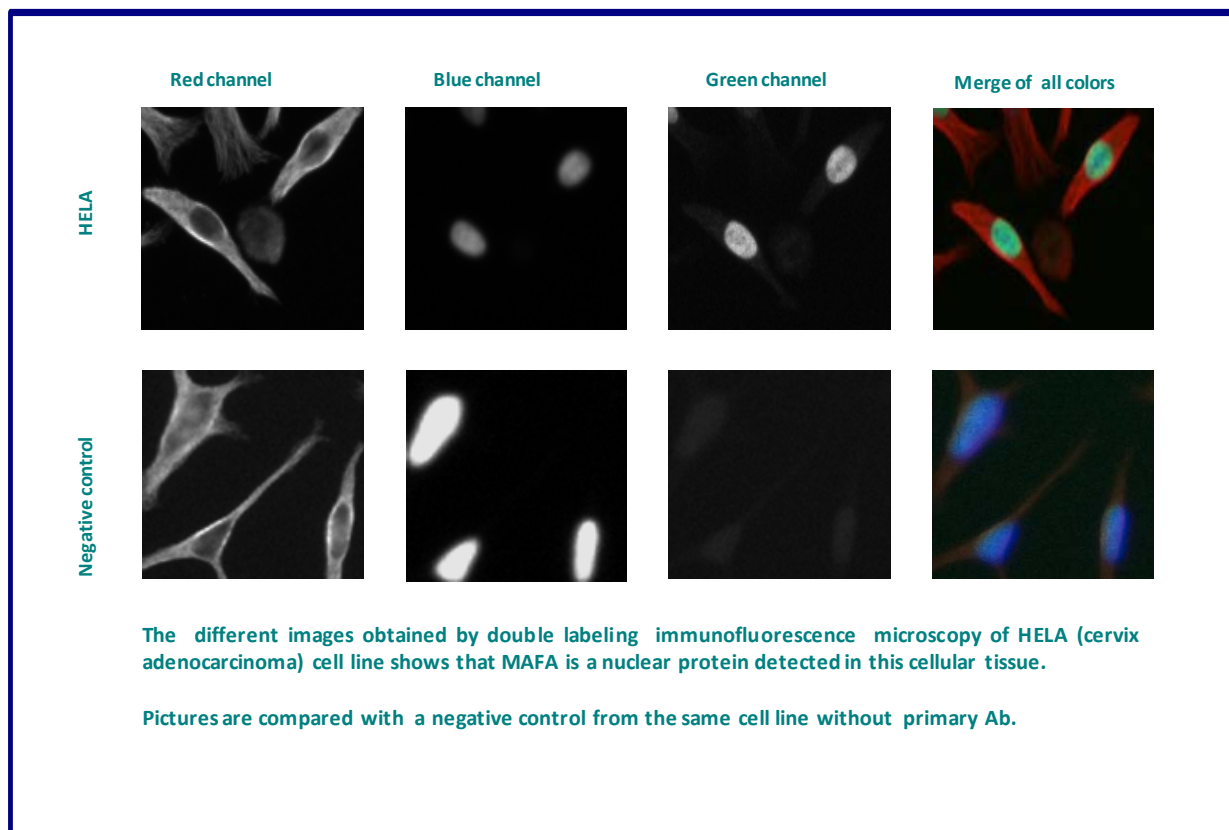
Red staining : cytoskeleton (microtubules/ α -tubuline)

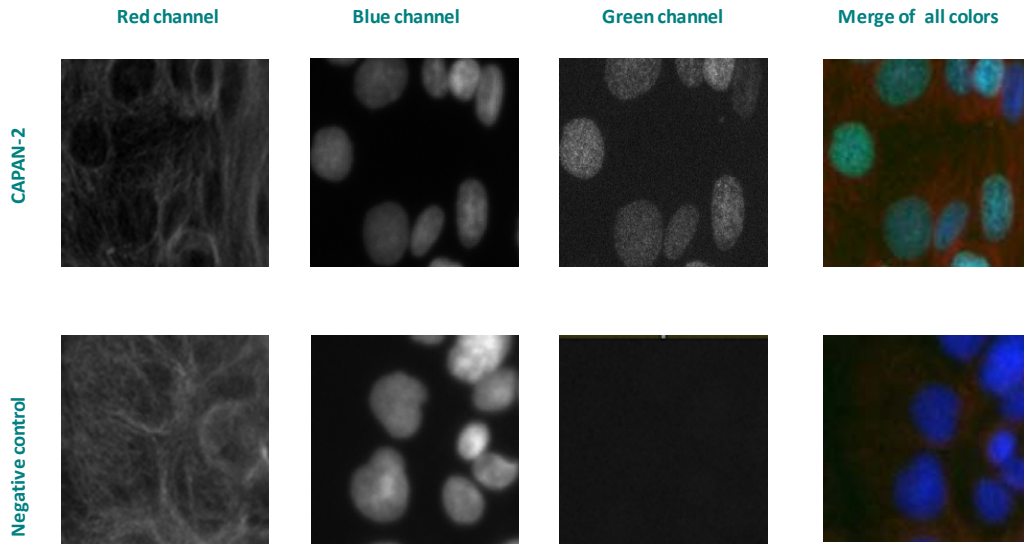
Blue staining : nucleus (Hoechst)

Green staining : anti- MAFA antibody (purified)

Expected subcellular location : Nucleus

Note: Detected in nuclei of pancreas islet beta cells.





The different images obtained by double labeling immunofluorescence microscopy of CAPAN- 2 (Pancreas adenocarcinoma) cell line shows that MAFA is a nuclear 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 nuclear distribution.