

PRODUCT INFORMATION

Product name : PITX3 antibody

Product type : Primary antibodies

Description : Rabbit polyclonal to PITX3

Immunogen : 3 synthetic peptides (human) conjugated to KLH

Reacts with : Hu, Ms

Tested applications : ELISA, WB and IF

GENE INFORMATION

Gene Symbol : PITX3

Gene Name : paired-like homeodomain 3

Ensembl ID : ENSG00000107859

Entrez Gene ID : 5309

Swiss-Prot : O75364

Molecular weight of PITX3 : 31.8 kDa

Function : Transcriptional regulator which is important for the differentiation and maintenance of meso-diencephalic dopaminergic (mdDA) neurons during development. In addition to its importance during development, it also has roles in the long-term survival and maintenance of the mdDA neurons. Activates NR4A2/NURR1-mediated transcription of genes such as SLC6A3, SLC18A2, TH and DRD2 which are essential for development of mdDA neurons. Acts by decreasing the interaction of NR4A2/NURR1 with the corepressor NCOR2/SMRT which acts through histone deacetylases (HDACs) to keep promoters of NR4A2/NURR1 target genes in a repressed deacetylated state. Essential for the normal lens development and differentiation. Plays a critical role in the maintenance of mitotic activity of lens epithelial cells, fiber cell differentiation and in the control of the temporal and spatial activation of fiber cell-specific crystallins. Positively regulates FOXE3 expression and negatively regulates PROX1 in the anterior lens epithelium, preventing activation of CDKN1B/P27Kip1 and CDKN1C/P57Kip2 and thus maintains lens epithelial cells in cell cycle

Expected subcellular localization : Nucleus.

Expected tissue specificity : Highly expressed in developing eye lens.

Summary: This gene encodes a member of the RIEG/PITX homeobox family, which is in the bicoid class of homeodomain proteins. Members of this family act as transcription factors. This protein is involved in lens formation during eye development. Mutations of this gene have been associated with anterior segment mesenchymal dysgenesis and congenital cataracts.

APPLICATION NOTE

Recommended dilution :

- **ELISA:** Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A minimum titer of 1/30000 has been determined. Appropriate specificity controls were run.
- **WB (recombinant protein):** 1/5000.
- **IF:** 1/5000.

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.

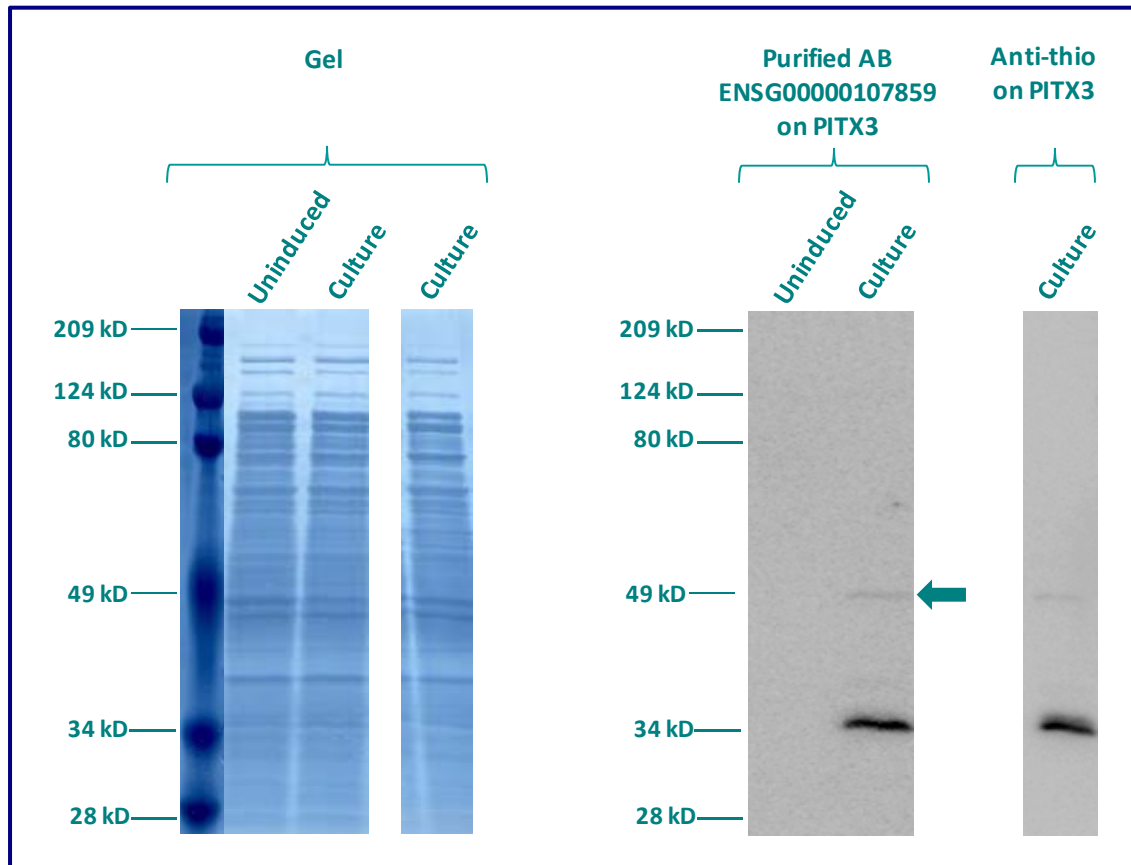
WESTERN BLOT ON RECOMBINANT PROTEIN

The purified antibody ENSG00000107859 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 PITX3 : 45.8kDa (31.8kDa + 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 ENSG00000107859 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 Pituitary homeobox 3 (PITX3) expression in 3 cells lines (293T/17, Capan-2, SH-SY5Y). The purified Antibody ENSG00000107859 has been tested at 1/5000.

Red staining : cytoskeleton (microtubules/ α -tubuline)

Blue staining : nucleus (Hoechst)

Green staining : anti- PITX3 antibody (purified)

Expected subcellular location : Nucleus

Expected tissue specificity : Highly expressed in developing eye lens

