

Goat Anti-PITX3 Antibody
Peptide-affinity purified goat antibody
Catalog # AF1836a

Specification

Goat Anti-PITX3 Antibody - Product Information

Application	WB
Primary Accession	O75364
Other Accession	NP_005020 , 5309
Reactivity	Human
Host	Goat
Clonality	Polyclonal
Concentration	100ug/200ul
Isotype	IgG
Calculated MW	31832

Goat Anti-PITX3 Antibody - Additional Information

Gene ID 5309

Other Names

Pituitary homeobox 3, Homeobox protein PITX3, Paired-like homeodomain transcription factor 3, PITX3, PTX3

Format

0.5 mg IgG/ml in Tris saline (20mM Tris pH7.3, 150mM NaCl), 0.02% sodium azide, with 0.5% bovine serum albumin

Storage

Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.

Precautions

Goat Anti-PITX3 Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Goat Anti-PITX3 Antibody - Protein Information

Name PITX3

Synonyms PTX3

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 (By similarity).

Cellular Location

Nucleus {ECO:0000255|PROSITE-ProRule:PRU00108, ECO:0000255|PROSITE-ProRule:PRU00138}

Tissue Location

Highly expressed in developing eye lens.

Goat Anti-PITX3 Antibody - Protocols

Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Goat Anti-PITX3 Antibody - Images



AF1836a (1 µg/ml) staining of Human Cerebellum lysate (35 µg protein in RIPA buffer). Primary incubation was 1 hour. Detected by chemiluminescence.

Goat Anti-PITX3 Antibody - Background

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.

Goat Anti-PITX3 Antibody - References

Preliminary evidence that polymorphisms in dopamine-related transcription factors LMX1A, LMX1B and PITX3 are associated with schizophrenia. Bergman O, et al. Prog Neuropsychopharmacol Biol Psychiatry, 2010 Aug 16. PMID 20570600.

Analysis of the Micro-RNA-133 and PITX3 genes in Parkinson's disease. de Mena L, et al. Am J Med Genet B Neuropsychiatr Genet, 2010 Sep. PMID 20468068.

Absence of PITX3 mutation in a Tunisian family with congenital cataract and mental retardation. Chograni M, et al. Mol Vis, 2010 Apr 3. PMID 20376326.

Transcription factor PITX3 gene in Parkinson's disease. Le W, et al. Neurobiol Aging, 2009 Apr 24. PMID 19394114.

Association of transcription factor polymorphisms PITX3 and EN1 with Parkinson's disease. Haubenberger D, et al. Neurobiol Aging, 2009 Apr 2. PMID 19345444.

Goat Anti-PITX3 Antibody - Citations

- [Schizophrenia-like features in transgenic mice overexpressing human HO-1 in the astrocytic compartment.](#)