


Product datasheet

Anti-PITX3/PTX3 antibody ab30734

★★★★★ [5 Abreviews](#) [11 References](#) [1 Image](#)

Overview

Product name	Anti-PITX3/PTX3 antibody
Description	Rabbit polyclonal to PITX3/PTX3
Host species	Rabbit
Tested applications	Suitable for: WB
Species reactivity	Reacts with: Human Predicted to work with: Mouse, Rat 
Immunogen	Synthetic peptide corresponding to Mouse PITX3/PTX3 aa 1-100 conjugated to keyhole limpet haemocyanin. (Peptide available as ab31696 , ab31697)
Positive control	WB: Y79, U87-MG, and HEK-293 whole cell lysates.
General notes	Western blot blocking was performed with 5% milk. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C or -80°C. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.40 Preservative: 0.02% Sodium azide Constituent: PBS Batches of this product that have a concentration < 1mg/ml may have BSA added as a stabilising agent. If you would like information about the formulation of a specific lot, please contact our scientific support team who will be happy to help.

Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab30734 in the following tested applications. The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		1/250. Detects a band of approximately 35 kDa (predicted molecular weight: 32 kDa). Abcam recommends using 5% milk as the blocking agent.

Target

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.

Tissue specificity Highly expressed in developing eye lens.

Involvement in disease Defects in PITX3 are a cause of cataract autosomal dominant (ADC) [MIM:604219]. Cataract is an opacification of the crystalline lens of the eye that frequently results in visual impairment or blindness. Opacities vary in morphology, are often confined to a portion of the lens, and may be static or progressive. In general, the more posteriorly located and dense an opacity, the greater the impact on visual function. Cataract is the most common treatable cause of visual disability in childhood.

Defects in PITX3 are a cause of anterior segment mesenchymal dysgenesis (ASMD) [MIM:107250]; also known as anterior segment ocular dysgenesis (ASOD). ASMD consists of a range of developmental defects in structures at the front of the eye, resulting from abnormal migration or differentiation of the neural crest derived mesenchymal cells that give rise to the cornea, iris, and other components of the anterior chamber during eye development. Mature anterior segment anomalies are associated with an increased risk of glaucoma and corneal opacity. Conditions falling within the phenotypic spectrum include aniridia, posterior embryotoxon, Axenfeld anomaly, Reiger anomaly/syndrome, Peters anomaly, and iridogoniodysgenesis.

Defects in PITX3 are the cause of cataract posterior polar type 4 (CTPP4) [MIM:610623]. A subcapsular opacity, usually disk-shaped, located at the back of the lens. It can have a marked effect on visual acuity. Some patients affected by cataract posterior polar type 4 can present a

severe phenotype including microphthalmia and neurological dysfunction.

Sequence similarities

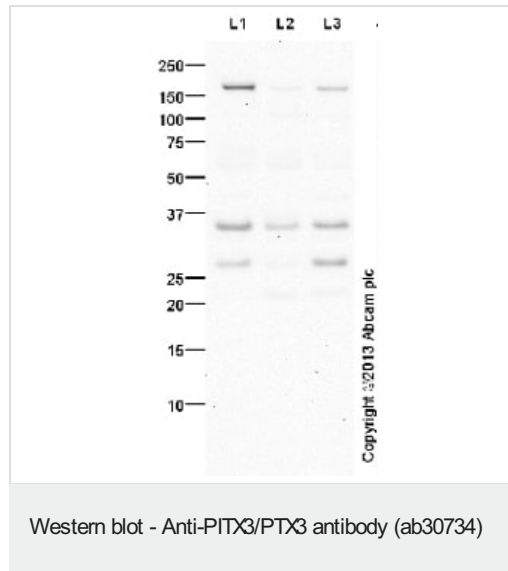
Belongs to the paired homeobox family. Bicoid subfamily.

Contains 1 homeobox DNA-binding domain.

Cellular localization

Nucleus.

Images



All lanes : Anti-PITX3/PTX3 antibody (ab30734) at 1 µg/ml (5% Milk block)

Lane 1 : Y79 (Human retinoblastoma cell line) Whole Cell Lysate

Lane 2 : U-87 MG (Human glioblastoma astrocytoma) Whole Cell Lysate

Lane 3 : HEK293 (Human embryonic kidney cell line) Whole Cell Lysate

Lysates/proteins at 10 µg per lane.

Secondary

All lanes : Goat Anti-Rabbit IgG H&L (HRP) ([ab97051](#)) at 1/10000 dilution

Performed under reducing conditions.

Predicted band size: 32 kDa

Observed band size: 35 kDa

Additional bands at: 160 kDa, 26 kDa. We are unsure as to the identity of these extra bands.

Exposure time: 8 minutes

Abcam recommends using milk as the blocking agent. Abcam welcomes customer feedback and would appreciate any comments regarding this product and the data presented above.

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