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Anti-CHX10 Picoband Antibody

Catalog # ABO13045

Product Information

Application	WB
Primary Accession	P58304
Host	Rabbit
Reactivity	Human, Mouse
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Visual system homeobox 2(VSX2) detection. Tested with WB in Human;Mouse.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	338917
Other Names	Visual system homeobox 2, Ceh-10 homeodomain-containing homolog, Homeobox protein CHX10, VSX2, CHX10, HOX10
Calculated MW	39411
Application Details	Western blot, 0.1-0.5 □g/ml, Mouse, Human
Subcellular Localization	Nucleus.
Tissue Specificity	Abundantly expressed in retinal neuroblasts during eye development and in the inner nuclear layer of the adult retina. Within this layer, expression is stronger in the outer margin where bipolar cells predominate.
Source	Eukaryota
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
Immunogen	E. coli-derived human CHX10 recombinant protein (Position: A249-A361). Human CHX10 shares 90.3% amino acid (aa) sequence identity with mouse CHX10.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins.
Storage	At -20˚C for one year. After r˚Constitution, at 4˚C for one month. It˚Can also be aliquotted and stored frozen at -20˚C for a longer time. Avoid repeated freezing and thawing.

Protein Information

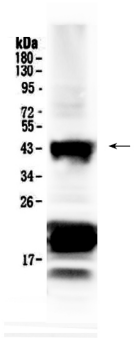
Name	VSX2
Synonyms	CHX10, HOX10
Function	Acts as a transcriptional regulator through binding to DNA at the consensus sequence 5'-[TC]TAATT[AG][AG]-3' upstream of gene promoters (PubMed:27301076). Plays a significant role in the specification and morphogenesis of the sensory retina (By similarity). May play a role in specification of V2a interneurons during spinal cord development (By similarity). Mediates differentiation of V2a interneurons by repression of motor neuron gene transcription, via competitively binding to response elements that are activated by the ISL1-LHX3 complex, such as VSX1 (PubMed:17919464, PubMed:27477290). Acts as a positive transcriptional regulator of NXNL1; regulation is significantly increased in synergy with VSX1 (By similarity). Acts as a negative transcriptional regulator of MITF (By similarity). Represses SAG transcription by competitive inhibition of ISL1-LHX3 response elements (PubMed:16236706, PubMed:27477290). Binds to the photoreceptor conserved element-1 (PCE-1) in the promoter of rod photoreceptor arrestin SAG and acts as a transcriptional repressor (By similarity). Involved in the development of retinal ganglion cells (RGCs) which leads to release of SHH by RGCs, promoting Hedgehog signaling and subsequent proliferation of retinal progenitor cells (By similarity). Participates in the development of the cells of the inner nuclear layer, by promoting postnatal differentiation of bipolar cells with a comparable inhibition of rod cell differentiation (By similarity). May play a role in the maintenance of neural retina identity during development by regulation of canonical Wnt genes and CTNNB1 localization, suggesting a role in the regulation of canonical Wnt signaling (PubMed:27301076).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q61412}.
Tissue Location	Abundantly expressed in retinal neuroblasts during eye development and in the inner nuclear layer of the adult retina Within this layer, expression is stronger in the outer margin where bipolar cells predominate

Background

Visual system homeobox 2 is a protein that in humans is encoded by the VSX2 gene. This gene encodes a homeobox protein originally described as a retina-specific transcription factor. Mutations in this gene are associated with microphthalmia, cataracts and iris abnormalities. In situ hybridization to human fetal retinal sections detected CHX10 expression in retinal neuroblasts at all stages examined. Human CHX10 is expressed in progenitor cells of the developing neuroretina and in the inner nuclear layer of the mature retina.

Images

Figure 1. Western blot analysis of CHX10 using anti-CHX10 antibody (ABO13045).



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