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VSX2 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP16493b

Specification

VSX2 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession P58304

VSX2 Antibody (C-term) Blocking Peptide - Additional Information

Gene ID 338917

Other Names
Visual system homeobox 2, Ceh-10 homeodomain-containing homolog, Homeobox protein CHX10, VSX2, CHX10, HOX10

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

VSX2 Antibody (C-term) Blocking Peptide - 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

VSX2 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

VSX2 Antibody (C-term) Blocking Peptide - Images

VSX2 Antibody (C-term) Blocking Peptide - Background

This gene encodes a homeobox protein originally describedas a retina-specific transcription factor. Mutations in this geneare associated with microphthalmia, cataracts and irisabnormalities.

VSX2 Antibody (C-term) Blocking Peptide - References

Gonzalez-Rodriguez, J., et al. Br J Ophthalmol 94(8):1100-1104(2010)Iseri, S.U., et al. Hum. Genet. 128(1):51-60(2010)Reichman, S., et al. Hum. Mol. Genet. 19(2):250-261(2010)Nagel, S., et al. Mol. Cancer 9, 151 (2010) :Zhang, X., et al. Mol. Vis. 15, 2911-2918 (2009) :