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SIX3 Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP51780

Specification

SIX3 Antibody - Product Information

Application	**WB, E**
Primary Accession	O95343
Reactivity	**Human, Mouse, Rat**
Host	**Rabbit**
Clonality	**Polyclonal**
Calculated MW	**35 KDa**

SIX3 Antibody - Additional Information

Gene ID 6496

Other Names
Homeobox protein SIX3, Sine oculis homeobox homolog 3, SIX3

Dilution
WB~~1:1000
E~~N/A

Format
0.01M PBS, pH 7.2, 0.09% (W/V) Sodium azide, Glycerol 50%

Storage
Store at -20 °C.Stable for 12 months from date of receipt

SIX3 Antibody - Protein Information

Name SIX3

Function
Transcriptional regulator which can act as both a transcriptional repressor and activator by binding a ATTA homeodomain core recognition sequence on these target genes. During forebrain development represses WNT1 expression allowing zona limitans intrathalamica formation and thereby ensuring proper anterio-posterior patterning of the diencephalon and formation of the rostral diencephalon. Acts as a direct upstream activator of SHH expression in the rostral diencephalon ventral midline and that in turn SHH maintains its expression. In addition, Six3 activity is required for the formation of the telencephalon. During postnatal stages of brain development is necessary for ependymal cell maturation by promoting the maturation of radial glia into ependymal cells through regulation of neuroblast proliferation and migration. Acts on the proliferation and differentiation of neural progenitor cells through activating transcription of CCND1 and CCND2. During early lens formation plays a role in lens induction and specification by activating directly PAX6 in the presumptive lens ectoderm. In turn PAX6 activates SIX3 resulting in activation of PDGFRA and CCND1 promoting cell proliferation. Also is required for the neuroretina

development by directly suppressing WNT8B expression in the anterior neural plate territory. Its action during retina development and lens morphogenesis is TLE5 and TLE4-dependent manner. Furthermore, during eye development regulates several genes expression. Before and during early lens development represses the CRYGF promoter by binding a SIX repressor element. Directly activates RHO transcription, or cooperates with CRX or NRL. Six3 also functions in the formation of the proximodistal axis of the optic cup, and promotes the formation of optic vesicles-like structures. During pituitary development, acts in parallel or alternatively with HESX1 to control cell proliferation through Wnt/beta-catenin pathway (By similarity). Plays a role in eye development by suppressing WNT1 expression and in dorsal-ventral patterning by repressing BMP signaling pathway.

Cellular Location
Nucleus {ECO:0000250|UniProtKB:Q62233, ECO:0000255|PROSITE-ProRule:PRU00108}

SIX3 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 Cytomety
- Cell Culture

SIX3 Antibody - Images

SIX3 Antibody - Background

May be involved in visual system development.

SIX3 Antibody - References

Granadino B.,et al.Genomics 55:100-105(1999).
Leppert G.S.,et al.Ophthalmic Genet. 20:7-21(1999).
Clark B.J.,et al.Submitted (NOV-1998) to the EMBL/GenBank/DDBJ databases.
Hillier L.W.,et al.Nature 434:724-731(2005).
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