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POU4F2 Antibody (C-term)

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP14993b

Product Information

Application	WB, E
Primary Accession	Q12837
Other Accession	Q63934, NP_004566.2
Reactivity	Human, Mouse
Predicted	Mouse
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB35235
Calculated MW	43087
Antigen Region	311-339

Additional Information

Gene ID	5458
Other Names	POU domain, class 4, transcription factor 2, Brain-specific homeobox/POU domain protein 3B, Brain-3B, Brn-3B, POU4F2, BRN3B
Target/Specificity	This POU4F2 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 311-339 amino acids from the C-terminal region of human POU4F2.
Dilution	WB~~1:1000 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	POU4F2 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	POU4F2 (HGNC:9219)
Synonyms	BRN3B

Function	Tissue-specific DNA-binding transcription factor involved in the development and differentiation of target cells (PubMed:19266028, PubMed:23805044). Functions either as activator or repressor modulating the rate of target gene transcription through RNA polymerase II enzyme in a promoter-dependent manner (PubMed:19266028, PubMed:23805044). Binds to the consensus octamer motif 5'-AT[A/T]A[T/A]T[A/T]A-3' of promoter of target genes. Plays a fundamental role in the gene regulatory network essential for retinal ganglion cell (RGC) differentiation. Binds to an octamer site to form a ternary complex with ISL1; cooperates positively with ISL1 and ISL2 to potentiate transcriptional activation of RGC target genes being involved in RGC fate commitment in the developing retina and RGC axon formation and pathfinding. Inhibits DLX1 and DLX2 transcriptional activities preventing DLX1- and DLX2-mediated ability to promote amacrine cell fate specification. In cooperation with TP53 potentiates transcriptional activation of BAX promoter activity increasing neuronal cell apoptosis. Negatively regulates BAX promoter activity in the absence of TP53. Acts as a transcriptional coactivator via its interaction with the transcription factor ESR1 by enhancing its effect on estrogen response element (ERE)-containing promoter. Antagonizes the transcriptional stimulatory activity of POU4F1 by preventing its binding to an octamer motif. Involved in TNFSF11-mediated terminal osteoclast differentiation (By similarity).
Cellular Location	Nucleus. Nucleus speckle. Cytoplasm {ECO:0000250|UniProtKB:Q63934}
Tissue Location	Expressed in the brain (PubMed:7691107). Expressed in the ganglion cell layer of the retina (PubMed:7691107)

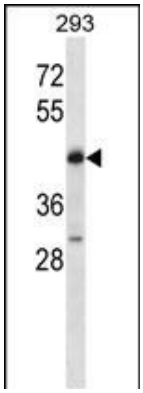
Background

POU4F2 is a member of the POU-domain family of transcription factors. POU-domain proteins have been observed to play important roles in control of cell identity in several systems. A class IV POU-domain protein, POU4F2 is found in human retina exclusively within a subpopulation of ganglion cells where it may play a role in determining or maintaining the identities of a small subset of visual system neurons.

References

Qiu, F., et al. J. Neurosci. 28(13):3392-3403(2008)
Budhram-Mahadeo, V.S., et al. Oncogene 27(1):145-154(2008)
Calissano, M., et al. FEBS Lett. 581(13):2490-2496(2007)
Choy, K.W., et al. Physiol. Genomics 25(1):9-15(2006)
Samady, L., et al. Int. J. Cancer 118(4):869-878(2006)

Images



POU4F2 Antibody (C-term) (Cat. #AP14993b) western blot analysis in 293 cell line lysates (35ug/lane).This demonstrates the POU4F2 antibody detected the POU4F2 protein (arrow).

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.