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NeuroD1 Antibody (C-term)

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP2021b

Product Information

Application	WB, E
Primary Accession	Q13562
Other Accession	Q64289, Q60867
Reactivity	Human, Rat, Mouse
Predicted	Rat, Bovine, Canine
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Calculated MW	39920
Antigen Region	318-348

Additional Information

Gene ID	4760
Other Names	Neurogenic differentiation factor 1, NeuroD, NeuroD1, Class A basic helix-loop-helix protein 3, bHLHa3, NEUROD1, BHLHA3, NEUROD
Target/Specificity	This NeuroD1 antibody is generated from rabbits immunized with a KLH conjugated synthetic peptide between 318-348 amino acids from the C-terminal region of human NeuroD1.
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 prepared by Saturated Ammonium Sulfate (SAS) precipitation followed by dialysis against PBS.
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	NeuroD1 Antibody (C-term) is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	NEUROD1
Synonyms	BHLHA3, NEUROD
Function	Acts as a transcriptional activator: mediates transcriptional activation by

	binding to E box-containing promoter consensus core sequences 5'-CANNTG-3'. Associates with the p300/CBP transcription coactivator complex to stimulate transcription of the secretin gene as well as the gene encoding the cyclin-dependent kinase inhibitor CDKN1A. Contributes to the regulation of several cell differentiation pathways, like those that promote the formation of early retinal ganglion cells, inner ear sensory neurons, granule cells forming either the cerebellum or the dentate gyrus cell layer of the hippocampus, endocrine islet cells of the pancreas and enteroendocrine cells of the small intestine. Together with PAX6 or SIX3, is required for the regulation of amacrine cell fate specification. Also required for dendrite morphogenesis and maintenance in the cerebellar cortex. Associates with chromatin to enhancer regulatory elements in genes encoding key transcriptional regulators of neurogenesis (By similarity).
Cellular Location	Cytoplasm. Nucleus {ECO:0000255|PROSITE-ProRule:PRU00981, ECO:0000269|PubMed:14752053} Note=In pancreatic islet cells, shuttles to the nucleus in response to glucose stimulation (By similarity). Colocalizes with NR0B2 in the nucleus.

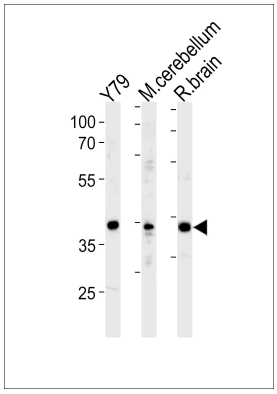
Background

NeuroD1 is a transcriptional activator that acts as a differentiation factor during neurogenesis. It has been demonstrated to bind to the insulin gene E-box. Efficient DNA binding requires dimerization with another basic helix-loop-helix (bHLH) protein. Defects in NEUROD1 are a cause of maturity onset diabetes of the young type VI (MODY6). MODY6 is a form of non-insulin-dependent diabetes mellitus characterized by an autosomal dominant mode of inheritance, onset during young adulthood and a primary defect in insulin secretion.

References

Strausberg, R.L., et al., Proc. Natl. Acad. Sci. U.S.A. 99(26):16899-16903 (2002). Miyachi, T., et al., Brain Res. Mol. Brain Res. 69(2):223-231 (1999). Malecki, M.T., et al., Nat. Genet. 23(3):323-328 (1999). Acharya, H.R., et al., Biochem. Biophys. Res. Commun. 233(2):459-463 (1997). Yokoyama, M., et al., Brain Res. Mol. Brain Res. 42(1):135-139 (1996).

Images



NeuroD1 Antibody (I333) (Cat. #AP2021b) western blot analysis in Y79 cell line ,mouse cerebellum and rat brain tissue lysates (35ug/lane).This demonstrates the NeuroD1 antibody detected the NeuroD1 protein (arrow).

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