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NeuroD1 Antibody (C-term) Blocking Peptide

Synthetic peptide
Catalog # BP2021b

Specification

NeuroD1 Antibody (C-term) Blocking Peptide - Product Information

Primary Accession Q13562

NeuroD1 Antibody (C-term) Blocking Peptide - 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
The synthetic peptide sequence used to generate the antibody AP2021b was selected from the C-term region of human NeuroD1 . A 10 to 100 fold molar excess to antibody is recommended. Precise conditions should be optimized for a particular assay.

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.

NeuroD1 Antibody (C-term) Blocking Peptide - 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.

NeuroD1 Antibody (C-term) Blocking Peptide - Protocols

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

- Blocking Peptides

NeuroD1 Antibody (C-term) Blocking Peptide - Images

NeuroD1 Antibody (C-term) Blocking Peptide - 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.

NeuroD1 Antibody (C-term) Blocking Peptide - 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).