

**NeuroD1 Antibody (N-term) Blocking Peptide**  
**Synthetic peptide**  
**Catalog # BP2021a****Specification**

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**NeuroD1 Antibody (N-term) Blocking Peptide - Product Information**Primary Accession [Q13562](#)**NeuroD1 Antibody (N-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 [AP2021a](/product/products/AP2021a) was selected from the N-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 (N-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 (N-term) Blocking Peptide - Protocols**

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

- [Blocking Peptides](#)

**NeuroD1 Antibody (N-term) Blocking Peptide - Images****NeuroD1 Antibody (N-term) Blocking Peptide - Background**

NeuroD1 acts as a differentiation factor during neurogenesis. They are expressed transiently in a subset of neurons in the central and peripheral nervous systems at the time of their terminal differentiation. NeuroD1 is a basic helix-loop-helix (bHLH) protein contain 1 bHLH domain. NeuroD1 is a transcriptional activator, for efficient DNA binding it requires dimerization with another bHLH protein. It was reported that NeuroD1 involves heterodimerization with the ubiquitous bHLH protein E47, and regulates insulin gene expression by binding to a critical E-box motif on the insulin promoter. Defects in NEUROD1 causes maturity onset diabetes of the young type VI. MODY6 is a form of non-insulin-dependent diabetes mellitus (NIDDM) characterized by an autosomal dominant mode of inheritance, onset during young adulthood and a primary defect in insulin secretion.

**NeuroD1 Antibody (N-term) Blocking Peptide - References**

Breslin, M.B., et al., J. Biol. Chem. 278(40):38991-38997 (2003).Malecki, M.T., et al., Acta Diabetol 40(2):109-111 (2003).Cinek, O., et al., Diabetes Res. Clin. Pract. 60(1):49-56 (2003).Ye, L., et al., Zhonghua Yi Xue Yi Chuan Xue Za Zhi 19(6):484-487 (2002).Kanatsuka, A., et al., Metab. Clin. Exp. 51(9):1161-1165 (2002).