



Rabbit Anti-NeuroD1 antibody

SL1517R

Product Name:	NeuroD1
Chinese Name:	神经Cell differentiation因子1抗体
Alias:	atonal; Neurod1 protein; basic helix loop helix transcription factor; bHLHa3; class A basic helix loop helix protein 3; Class A basic helix-loop-helix protein 3; MODY 6; MODY6; NDF1_HUMAN; NeuroD1; neurogenic helix loop helix protein NEUROD; Beta cell E box transactivator 2; BETA2; BHF 1; BHF1; NEUROD; Neurogenic differentiation 1; Neurogenic differentiation factor 1; NIDDM; BHLHA3; NEUROD1.
Organism Species:	Rabbit
Clonality:	Polyclonal
React Species:	Human,Mouse,Rat,Dog,Pig,Cow,
Applications:	ELISA=1:500-1000IHC-P=1:400-800IHC-F=1:400-800Flow-Cyt=0.2ug/testIF=1:100-500 (Paraffin sections need antigen repair) not yet tested in other applications. optimal dilutions/concentrations should be determined by the end user.
Molecular weight:	40kDa
Cellular localization:	The nucleuscytoplasmic
Form:	Lyophilized or Liquid
Concentration:	1mg/ml
immunogen:	KLH conjugated synthetic peptide derived from human NeuroD1:21-120/356
Lsotype:	IgG
Purification:	affinity purified by Protein A
Storage Buffer:	0.01M TBS(pH7.4) with 1% BSA, 0.03% Proclin300 and 50% Glycerol.
Storage:	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. The lyophilized antibody is stable at room temperature for at least one month and for greater than a year when kept at -20°C. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.
PubMed:	PubMed
Product Detail:	This gene encodes a member of the NeuroD family of basic helix-loop-helix (bHLH) transcription factors. The protein forms heterodimers with other bHLH proteins and activates transcription of genes that contain a specific DNA sequence known as the E-

box. It regulates expression of the insulin gene, and mutations in this gene result in type II diabetes mellitus. [provided by RefSeq, Jul 2008]

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 enhance regulatory elements in genes encoding key transcriptional regulators of neurogenesis (By similarity).

Subunit:

Interacts (via helix-loop-helix motif domain) with EP300 (via C-terminus) (By similarity). Heterodimer with TCF3/E47; the heterodimer is inhibited in presence of ID2, but not NR0B2, to E-box element. Efficient DNA-binding requires dimerization with another bHLH protein. Interacts with RREB1. Interacts with EP300; the interaction is inhibited by NR0B2. Interacts with TCF3; the interaction is inhibited by ID2.

Subcellular Location:

Cytoplasm. Nucleus. Note=In pancreatic islet cells, shuttles to the nucleus in response to glucose stimulation. Colocalizes with NR0B2 in the nucleus.

Post-translational modifications:

Phosphorylated. In islet cells, phosphorylated on Ser-274 upon glucose stimulation; which may be required for nuclear localization. In activated neurons, phosphorylated on Ser-335; which promotes dendritic growth. Phosphorylated by MAPK1; phosphorylation regulates heterodimerization and DNA-binding activities. Phosphorylation on Ser-266 and Ser-274 increases transactivation on the insulin promoter in glucose-stimulated insulinoma cells (By similarity).

DISEASE:

Maturity-onset diabetes of the young 6 (MODY6) [MIM:606394]: A form of diabetes that is characterized by an autosomal dominant mode of inheritance, onset in childhood or early adulthood (usually before 25 years of age), a primary defect in insulin secretion and frequent insulin-independence at the beginning of the disease. Note=The disease is caused by mutations affecting the gene represented in this entry.

Similarity:

Contains 1 bHLH (basic helix-loop-helix) domain.

SWISS:
Q13562

Gene ID:
4760

Database links:

[Entrez Gene: 4760](#) Human

[Entrez Gene: 18012](#) Mouse

[Entrez Gene: 29458](#) Rat

[Omim: 601724](#) Human

[SwissProt: Q13562](#) Human

[SwissProt: Q60867](#) Mouse

[SwissProt: Q64289](#) Rat

[Unigene: 574626](#) Human

[Unigene: 709709](#) Human

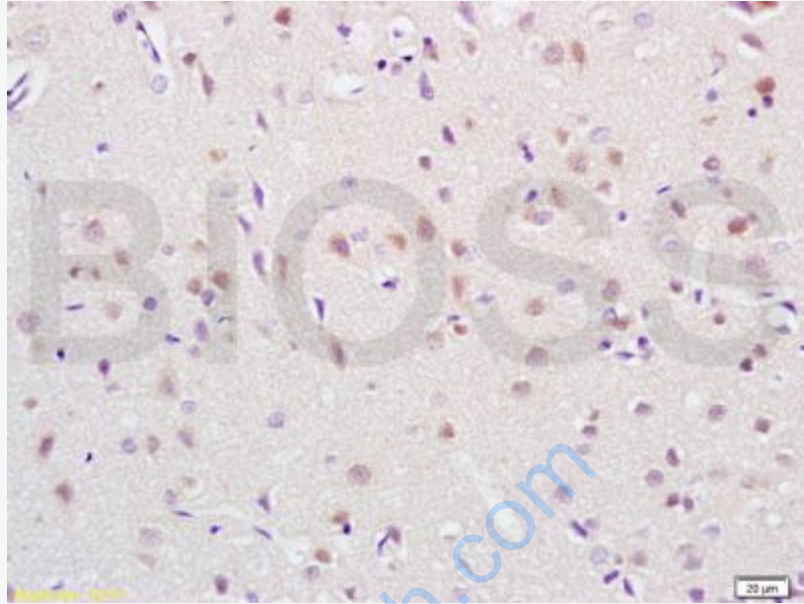
[Unigene: 4636](#) Mouse

[Unigene: 44289](#) Rat

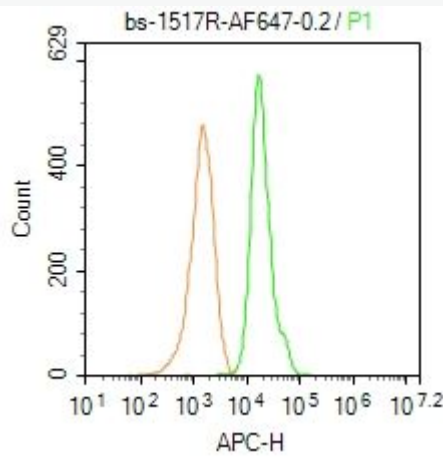
Important Note:

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

Neurobiology 相关蛋白 (Neurobiology)



Tissue/cell: rat brain tissue; 4% Paraformaldehyde-fixed and paraffin-embedded;
Antigen retrieval: citrate buffer (0.01M, pH 6.0), Boiling bathing for 15min; Block endogenous peroxidase by 3% Hydrogen peroxide for 30min; Blocking buffer (normal goat serum,C-0005) at 37°C for 20 min;
Incubation: Anti-NeuroD1 Polyclonal Antibody, Unconjugated(SL1517R) 1:200, overnight at 4°C, followed by conjugation to the secondary antibody(SP-0023) and DAB(C-0010) staining



Picture:

Blank control: Mouse spleen.

Primary Antibody (green line): Rabbit Anti-Neuro D1/AF647 Conjugated antibody (SL1517R)

Dilution: 0.2 μ g /10⁶ cells;

Isotype Control Antibody (orange line): Rabbit IgG-AF647.

Protocol

The cells were fixed with 4% PFA (10min at room temperature) and then permeabilized with 90% ice-cold methanol for 20 min at -20°C. The cells were then incubated in 5% BSA to block non-specific protein-protein interactions for 30 min at room temperature. The cells were stained with Primary Antibody for 30 min at room temperature. Acquisition of 20,000 events was performed.