NEUROD1 Polyclonal antibody

Catalog Number:12081-1-AP

Featured Product **16 Publications**

proteintech®
Antibodies | ELISA kits | Proteins
www.ptglab.com

Basic Information

Catalog Number:
12081-1-AP

Size:
150ul , Concentration: 550 ug/ml by Nanodrop and 467 ug/ml by Bradford method using BSA as the standard;

Source:
Rabbit

Isotype:
IgG

Immunogen Catalog Number:
AG2713

GenBank Accession Number:
BC009046

GeneID (NCBI):
4760

UNIPROT ID:
Q13562

Full Name:
neurogenic differentiation 1

Calculated MW:
356 aa, 40 kDa

Observed MW:
50 kDa

Purification Method:
Antigen affinity purification

Recommended Dilutions:
WB 1:500-1:1000
IP 0.5-4.0 ug for 1.0-3.0 mg of total protein lysate
IHC 1:50-1:500
IF-P 1:50-1:500

Applications

Tested Applications:
WB, IHC, IF-P, IP, ELISA

Cited Applications:
WB, IHC, IF

Species Specificity:
human, mouse, rat

Cited Species:
human, mouse, rat

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:

WB : Y79 cells, mouse pancreas tissue, rat pancreas tissue

IP : Y79 cells,

IHC : rat brain tissue, human pancreas cancer tissue, mouse brain tissue

IF-P : mouse brain tissue,

Background Information

NeuroD is a member of the basic helix-loop-helix (bHLH) family of transcription factors. The basic helix-loop-helix (bHLH) proteins are transcription factors that are required for several aspects of development, including cell type determination, terminal differentiation and sex determination. Members of the myogenic determination family, MyoD, myf5, myogenin and MRF4, all have bHLH domains.These proteins function by forming heterodimers with E-proteins and binding to the canonical E-box sequence CANNTG. Neuro D is expressed transiently in a subset of neurons in the central and peripheral nervous systems at the time of their terminal differentiation into mature neurons. Moreover, ectopic expression of Neuro D in Xenopus embryos induces premature differentiation of neuronal precursors and Neuro D can convert presumptive epidermal cells into neurons.The lack of NeuroD in the brain results in severe defects in development. Human mutations have been linked to a number of types of diabetes including type I diabetes mellitus and maturity-onset diabetes of the young. The calculated molecular weight of NEUROD1 is 39 kDa, but the modified NEUROD1 protein is about 45-50 kDa.

Notable Publications

Author	Pubmed ID	Journal	Application
Gwyneth M Welch	36170369	Sci Adv	IF
Jianwei Xie	33033581	Comput Struct Biotechnol J	IHC,WB
Kaitlin Ching	32931487	PLoS Biol	IF

Storage

Storage:
Store at -20℃. Stable for one year after shipment.
Storage Buffer:
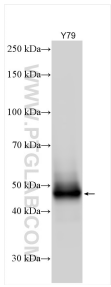PBS with 0.02% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

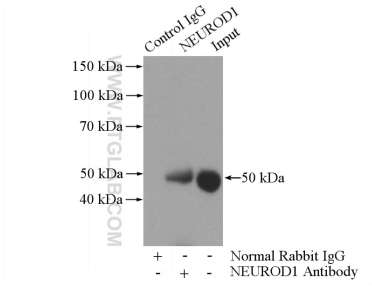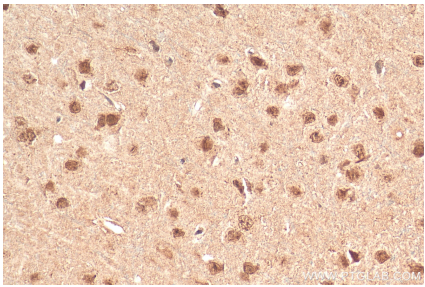***** 20ul sizes contain 0.1% BSA**

Selected Validation Data

Various lysates were subjected to SDS PAGE followed by western blot with 12081-1-AP (NEUROD1 antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.

IP result of anti-NEUROD1 (IP:12081-1-AP, 3ug; Detection:12081-1-AP 1:200) with Y79 cells lysate 2000ug.

Immunohistochemical analysis of paraffin-embedded rat brain tissue slide using 12081-1-AP (NEUROD1 antibody) at dilution of 1:200 (under 40x lens). Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0).
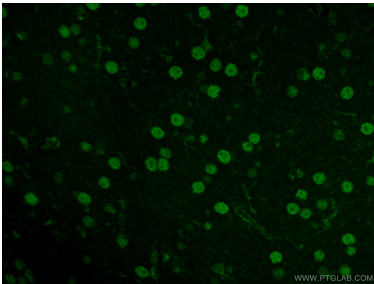
Immunofluorescent analysis of (4% PFA) fixed mouse brain tissue using 12081-1-AP (NEUROD1 antibody) at dilution of 1:50 and Alexa Fluor 488-Conjugated Goat Anti-Rabbit IgG(H+L).