

## NEUROD1 Polyclonal antibody

Catalog Number: 12081-1-AP

Featured Product

16 Publications

## Basic Information

## Catalog Number:

12081-1-AP

## Size:

550 µg/ml

## 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 µg 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

## 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,

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

## 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:

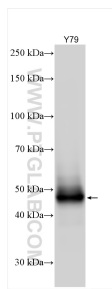
Store at -20°C. Stable for one year after shipment.

## Storage Buffer:

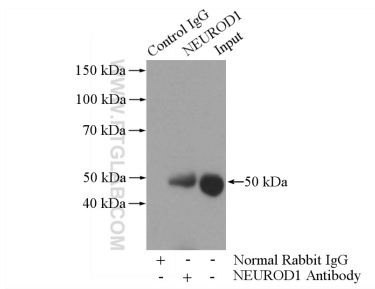
PBS with 0.02% sodium azide and 50% glycerol pH 7.3.

Aliquoting is unnecessary for -20°C storage

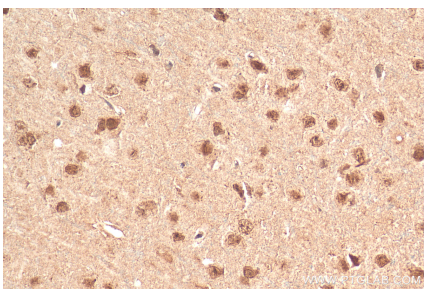
## Selected Validation Data



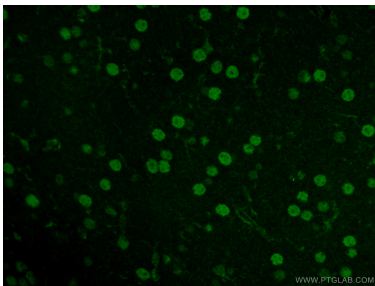
Various lysates were subjected to SDS PAGE followed by western blot with 12081-1-AP (NEUROD1 antibody) at dilution of 1:600 incubated at room temperature for 1.5 hours.



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).