

Product Information

Anti-NeuroD1

produced in rabbit, affinity isolated antibody

Product Number **N3663**

Product Description

Anti-NeuroD1 is produced in rabbit using as immunogen a synthetic peptide corresponding to amino acids 76-91 of human NeuroD1 (GenelD: 4760), conjugated to BSA. The corresponding sequence differs in mouse and rat by two and three amino acids, respectively. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-NeuroD1 specifically recognizes human, mouse and rat NeuroD1 by immunoblotting (doublet bands around 45 kDa). Detection of the NeuroD1 band by immunoblotting is specifically inhibited by the immunizing peptide.

NeuroD1 (Neurogenic differentiation factor 1, also known as NDF1, BHF-1 and BETA2) is a basic helix-loop-helix (bHLH) transcription factor known to influence the fate of specific neuronal, endocrine and retinal cells. It was cloned as an important regulator for insulin gene expression.¹ NeuroD1 is expressed in endocrine cells of the pancreas. Homozygous NeuroD1 knock-out mice fail to develop mature islets and die shortly after birth due to severe diabetes.² Two mutations in human NeuroD1 gene were found to be associated with the development of type-2 diabetes in the heterozygous state.³ NeuroD1 plays also an important role in the development of the nervous system and can convert epidermal cells to neurons in *Xenopus*.⁴ Analysis of NeuroD1 mutant mice also revealed various defects in the development of the nervous system, such as impaired hippocampal and cerebellar granule cell differentiation.⁵⁻⁷

Reagent

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide as a preservative.

Antibody concentration: ~1.0 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

For continuous use, store at 2-8 °C for up to one month. For extended storage, freeze in working aliquots. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilutions should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a working concentration of 0.5-1.0 µg/mL is recommended using whole extracts of HEK-293T cells expressing human NeuroD1.

Note: In order to obtain the best results using various techniques and preparations, we recommend determining the optimal working dilutions by titration.

References

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3. Malecki, M.T., et al., *Nat. Genet.*, **23**, 323-328 (1999).
4. Lee, J.E., et al, *Science*, **268**, 836-844 (1995).
5. Schwab, M.H., et al., *J. Neurosci.*, **20**, 3714-3724 (2000).
6. Liu, M., et al., *Proc. Natl. Acad. Sci. USA*, **97**, 865-870 (2000).
7. Cho, J.H., and Tasi, M.J., *Mol. Neurobiol.*, **30**, 35-47 (2004)

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