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Product Information

Anti-NR4A2 (N-terminal)
produced in rabbit, affinity isolated antibody

Product Number **N6413**

Product Description

Anti-NR4A2 (N-terminal) is developed in rabbit using as immunogen a synthetic peptide corresponding to a sequence at the N-terminal of human NR4A2 (GeneID: 4929), conjugated to KLH. This sequence is identical in human NR4A2a-c isoforms and in rat and mouse NR4A2. The antibody is affinity-purified using the immunizing peptide immobilized on agarose.

Anti-NR4A2 (N-terminal) specifically recognizes human NR4A2. The antibody may be used in several applications including immunoblotting (~70 kDa) and immunofluorescence. Detection of the NR4A2 band by immunoblotting is specifically inhibited by the NR4A2 immunizing peptide.

NR4A2 is a member of the NR4A orphan nuclear receptors subfamily. NR4A receptors function as transcription factors whose activity is controlled primarily at the level of protein expression and/or post-translational modification. NR4A2 (nuclear receptor subfamily 4, group A, member 2, also known as NOT, RNR1, HZF-3, NURR1, and TINUR) binds the NGFI-B (nerve growth factor-induced clone B) response element (NBRE) sequence (AAAGGTCA) as monomer.[1,2] NR4A2 is induced by multiple extracellular signals, including fatty acids, stress, prostaglandins, growth factors, calcium, inflammatory cytokines, peptide hormones, and neurotransmitters in a cell type specific manner.[2] Hepatic expression of NR4A2 is induced by cAMP in response to glucagon and fasting, and is increased in diabetic mice that exhibit elevated gluconeogenesis.[1] NR4A2 is essential for the differentiation of nigral dopaminergic neurons. Mice lacking Nurr1 failed to generate midbrain dopaminergic neurons.[3] NR4A2 mutations have been associated with disorders related to dopaminergic dysfunction, including Parkinson's disease, schizophrenia, and manic depression.[4,5]

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: ~1.5 mg/mL

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the 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 is not recommended. Storage in "frost-free" freezers is also 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 antibody concentration of 1–2 μg/mL recommended using HEK-293T cell lysate expressing human NR4A2.

Indirect immunofluorescence: a working concentration of 4-8 μg/mL is recommended using 3T3 cells.

Note: In order to obtain best results in various techniques and preparations, it is recommended to determine optimal working dilutions by titration.

References

1. Pei, L. et al., *Nature Med.*, **12**, 1048-1055 (2006).
2. Maxwell, M.A., and Muscat, G.E.O., *Nucl. Recept. Signal*, **4**, e002 (2006) (DOI: 10.1621/nrs.04002).
3. Zetterström, R. et al., *Science,* **276**, 248-250 (1997).
4. Hering, R. et al., *Neurology*, **62**, 1231-1232 (2004).
5. Rojas, P. et al., *Mol. Psychiatry*, **8**, 756-766 (2007).

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