PRODUCT INFORMATION

NR4A3 Ligand-binding Domain (human, recombinant)

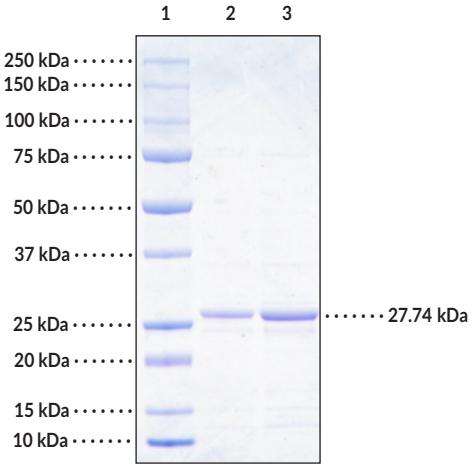
Item No. 40344

Overview and Properties

Synonyms:	Mitogen-induced Nuclear Orphan Receptor, Neuron-derived Orphan Receptor 1, Nuclear Hormone Receptor NOR-1, Nuclear Receptor Subfamily 4 Group A Member 3
Source:	Recombinant human N-terminal His-tagged NR4A3 expressed in *E. coli*
Amino Acids:	398-626
Uniprot No.:	Q92570
Molecular Weight:	27.74 kDa
Storage:	-80°C (as supplied)
Stability:	≥1 year
Purity:	≥80% estimated by SDS-PAGE
Supplied in:	50 mM Tris HCl, pH 7.5, with 100 mM sodium chloride, and 2% glycerol
Protein Concentration:	***batch specific*** mg/ml

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Images



Lane 1: MW Markers
Lane 2: NR4A3 Ligand-binding Domain (2 µg)
Lane 3: NR4A3 Ligand-binding Domain (4 µg)

SDS-PAGE Analysis of NR4A3 Ligand-binding Domain.

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Description

Nuclear receptor subfamily 4 group A member 3 (NR4A3) is a transcription factor and member of the NR4A orphan nuclear receptor family.[1,2] It is composed of an N-terminal activation function-1 (AF-1) transactivation domain, a DNA-binding domain, a variable linker region, and a C-terminal domain comprising a ligand-binding domain and an AF-2 domain. NR4A3 is primarily expressed in the fetal brain and lungs and adult heart and skeletal muscle, with both splice variants showing similar expression patterns.[3,4] It is involved in several biological processes, including apoptosis, differentiation, metabolism, inflammation, cardiac remodeling, and development, and its expression can be induced by several factors such as growth factors, cytokines, and stress.[1,2] Knockout of *Nr4a3* inhibits GM-CSF- and IL-4-induced differentiation of primary mouse monocytes into dendritic cells.[5] Overexpression of *NR4A3* reduces infarct size as a percentage of the area at risk in a mouse model of acute myocardial infarction.[6] Fusion proteins of NR4A3 with Ewing sarcoma protein (EWS) or TAF15 are associated with extraskeletal myxoid chondrosarcoma.[7]

References

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3. Ohkura, N., Ito, M., Tsukada, T., *et al.* Structure, mapping and expression of a human NOR-1 gene, the third member of the Nur77/NGFI-B family. *Biochim. Biophys. Acta* **308(3)**, 205-214 (1996).
4. Ohkura, N., Ito, M., Tsukada, T., *et al.* Alternative splicing generates isoforms of human neuron-derived orphan receptor-1 (NOR-1) mRNA. *Gene* **11(1)**, 79-85 (1998).
5. Boulet, S., Daudelin, J.-F., Odagiu, L., *et al.* The orphan nuclear receptor NR4A3 controls the differentiation of monocyte-derived dendritic cells following microbial stimulation. *Proc. Natl. Acad. Sci. USA* **116(30)**, 15150-15159 (2019).
6. Jiang, Y., Feng, Y.-P., Tang, L.-X., *et al.* The protective role of NR4A3 in acute myocardial infarction by suppressing inflammatory responses via JAK2-STAT3/NF-κB pathway. *Biochem. Biophys. Res. Commun.* **517(4)**, 697-702 (2019).
7. Hisaoka, M. and Hashimoto, H. Extraskeletal myxoid chondrosarcoma: updated clinicopathological and molecular genetic characteristics. *Pathol. Int.* **55(8)**, 453-463 (2005).

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