

Recombinant Human NR1D2, His-tagged

Cat. No. NR1D2-8488H **Lot. No.** (See product label)

SPECIFICATION

Product Overview	Recombinant Human NR1D2, fused with His tag, was expressed in Sf21 Cells.
Species	Human
Source	Sf21 Cells
Description	Nuclear receptors form the largest known family of transcription factors and have a crucial role in nearly all aspects of vertebrate development and adult physiology by transducing the effects of hormones into transcriptional responses. Members of the steroid/thyroid hormone nuclear receptor (NR) superfamily bind specific DNA elements and function as ligand activated transcription factors. This group includes the orphan receptors which have no known ligands in the `classical sense and appear to be the ancient progenitors of this receptor superfamily. The Rev-erb family of proteins are orphan members of the receptor superfamily. Two isoforms of the Rev-erb family have been isolated from mammalian genotypes, Rev-erbA[alpha] and Rev-erbA[beta]/RVR. Major differences between the two isoforms occur within the hyper-variable A/B and D regions of the proteins . Both isoforms are expressed in a wide range of tissues and are present in all major organs. Rev-erbA[alpha] mRNA is upregulated during adipocyte differentiation but repressed during myogenesis . These orphan receptors are closely related to the ROR/RZR[alpha] gene family (retinoic acid receptor related orphan receptor) and the Drosophila orphan receptor, E75A, particularly in the DNA-binding domain (DBD) and the putative ligand-binding domain (LBD). RVR and Rev-erbA[alpha] bind as monomers to an asymmetric (A / T) 6 RGGTCA motif. The Rev-erb family has also been demonstrated to bind as

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

homodimers to novel HREs consisting of two tandemly arranged AGGTCA motifs, separated by 2 bp with unique 5 flanking and spacer nucleotides (RevDR-2). Reports on the transcriptional properties of the Rev-erb family were initially conflicting. Rev-erbA[alpha] was first reported to act as a constitutive activator of transcription through its cognate monomeric asymmetric motif. Recently, it has been demonstrated that members of the Rev-erb family are, in fact, dominant repressors of transcription. Rev-erbA[beta] is expressed in the central nervous system, skeletal and dorsal muscles, spleen and mandibular and maxillar processes. During embryogenesis RVR is expressed in the notochord and neural tube, but its function/role during differentiation and mammalian development remains obscure.

Form	20 mM Tris-Cl, pH 7.9, 20% Glycerol, 100 mM KCl, 1 mM DTT and 0.2 mM EDTA
-------------	---

AA Sequence

```
MEVNAGGVIA YISSSSSASS HASCHSEGSE NSFQSSSSSV PSSPNSSNSD
TNGNPKNGDL ANIEGILKND RIDCSMKTSK SSAPGMTKSH SGVTKFSGMV
LLCKVCGDVA SGFHYGVHAC EGCKGFFRRS IQQNIQYKKC LKNENCSIMR
MNRNRCQQCR FKKCLSVGMS RDAVRFGRIK KREKQRMLIE MQSAMKTMMN
SQFSGHLQND TLVEHHEQTA LPAQEQLRPK PQLEQENIKS SSPPSSDFAK
EEVIGMVTRA HKDTFMYNQE QQENSAESMQ PKRGERIRKN MEQYNLNHDH
CGNGLSSHFP CSESQQHLNG QFKGRNIMHY PNGHAICIAN GHCMNFSNAY
TQRVCDRVPI DGFSQENENKN SYLCNTGGRM HLVCPMSKSP YVDPHKS GHE
IWEEFSMSFT PAVKEVVEFA KRIPGFRDLS QHDQVNLLKA GTFEVL MVRF
ASLFD AKERT VTFLSGKKYS VDDLHSMGAG DLLNSMFEFS EKLNALQLSD
EEMSLFTAVV LVSADRS GIE NVNSVEALQE TLIRALRTLI MKNHPNEASI
FTKLLLKLPD LRSLNNMHSE ELLAFKVHP
```

Purity	>95% as determined by SDS-PAGE
---------------	--------------------------------

Storage	-80 °C
----------------	--------

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Shipping

Dry Ice

GENE INFORMATION

Gene Name

NR1D2 nuclear receptor subfamily 1, group D, member 2 [Homo sapiens]

Official Symbol

NR1D2

Synonyms

NR1D2; nuclear receptor subfamily 1, group D, member 2; nuclear receptor subfamily 1 group D member 2; BD73; EAR 1r; Hs.37288; HZF2; RVR; rev-erb-beta; rev-erba-alpha-related receptor; V-erbA-related protein 1-related; orphan nuclear hormone receptor BD73; nuclear receptor Rev-ErbA beta variant 1; nuclear receptor Rev-ErbA beta variant 2; EAR-1R;

Gene ID

9975

mRNA Refseq

NM_001145425

Protein Refseq

NP_001138897

MIM

602304

UniProt ID

Q14995

**Chromosome
Location**

3p24.1

Pathway

Diurnally regulated genes with circadian orthologs, organism-specific biosystem; Gene Expression, organism-specific biosystem; Generic Transcription Pathway, organism-specific biosystem; Nuclear Receptor transcription pathway, organism-specific biosystem; Nuclear Receptors, organism-specific biosystem;

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA

Function

ligand-activated sequence-specific DNA binding RNA polymerase II transcription factor activity; metal ion binding; receptor activity; sequence-specific DNA binding; sequence-specific DNA binding transcription factor activity; steroid hormone receptor activity; zinc ion binding;

 Tel: 1-631-559-9269 1-516-512-3133

 Email: info@creative-biomart.com  Fax: 1-631-938-8127

 45-1 Ramsey Road, Shirley, NY 11967, USA