Datasheet for ABIN3094139

NR1D2 Protein (AA 1-579) (Strep Tag)

1 Image

Go to Product page

Overview

Quantity:	1 mg
Target:	NR1D2
Protein Characteristics:	AA 1-579
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This NR1D2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MEVNAGGVIA YISSSSSASS PASCHSEGSE NSFQSSSSSV PSSPNSSNSD TNGNPKNGDL ANIEGILKND RIDCSMKTSK SSAPGMTKSH SGVTKFSGMV LLCKVCGDVA SGFHYGVHAC EGCKGFFRRS IQQNIQYKKC LKNENCSIMR MNRNRCQQCR FKKCLSVGMS RDAVRFGRIP KREKQRMLIE MQSAMKTMMN SQFSGHLQND TLVEHHEQTA LPAQEQLRPK PQLEQENIKS SSPPSSDFAK EEVIGMVTRA HKDTFMYNQE QQENSAESMQ PQRGERIPKN MEQYNLNHDH CGNGLSSHFP CSESQQHLNG QFKGRNIMHY PNGHAICIAN GHCMNFSNAY TQRVCDRVPI DGFSQNENKN SYLCNTGGRM HLVCPMSKSP YVDPHKSGHE IWEEFSMSFT PAVKEVVEFA KRIPGFRDLS QHDQVNLLKA GTFEVLMVRF ASLFDAKERT VTFLSGKKYS VDDLHSMGAG DLLNSMFEFS EKLNALQLSD EEMSLFTAVV LVSADRSGIE NVNSVEALQE TLIRALRTLI MKNHPNEASI FTKLLLKLPD LRSLNNMHSE ELLAFKVHP **Sequence without tag. The proposed Strep-Tag is based on experience s with the expression system, a different complexity of the protein could make another tag necessary. In case you**

have a special request, please contact us.

Characteristics:

Key Benefits:

- Made in Germany - from design to production - by highly experienced protein experts.
- Protein expressed with ALiCE® and purified by multi-step, protein-specific process to ensure correct folding and modification.
- These proteins are normally active (enzymatically functional) as our customers have reported (not tested by us and not guaranteed).
- State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a **made-to-order protein** and will be made for the first time for your order. Our experts in the lab will ensure that you receive a correctly folded protein.

The big advantage of ordering our **made-to-order proteins** in comparison to ordering custom made proteins from other companies is that there is no financial obligation in case the protein cannot be expressed or purified.

Expression System:

- ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications.
- During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!

Concentration:

- The concentration of our recombinant proteins is measured using the absorbance at 280nm.
- The protein's absorbance will be measured in several dilutions and is measured against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:

Two step purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®):

1. In a first purification step, the protein is purified from the cleared cell lysate using StrepTag capture material. Eluate fractions are analyzed by SDS-PAGE.

Product Details

	2. Protein containing fractions of the best purification are subjected to second purification step through size exclusion chromatography. Eluate fractions are analyzed by SDS-PAGE and Western blot.
Purity:	>80 % as determined by SDS PAGE, Size Exclusion Chromatography and Western Blot.
Endotoxin Level:	Low Endotoxin less than 1 EU/mg (< 0.1 ng/mg)
Grade:	Crystallography grade

Target Details

Target:	NR1D2
Alternative Name:	NR1D2 (NR1D2 Products)
Background:	Nuclear receptor subfamily 1 group D member 2 (Orphan nuclear hormone receptor BD73) (Rev-erb alpha-related receptor) (RVR) (Rev-erb-beta) (V-erbA-related protein 1-related) (EAR-1R),FUNCTION: Transcriptional repressor which coordinates circadian rhythm and metabolic pathways in a heme-dependent manner. Integral component of the complex transcription machinery that governs circadian rhythmicity and forms a critical negative limb of the circadian clock by directly repressing the expression of core clock components BMAL1 and CLOCK. Also regulates genes involved in metabolic functions, including lipid metabolism and the inflammatory response. Acts as a receptor for heme which stimulates its interaction with the NCOR1/HDAC3 corepressor complex, enhancing transcriptional repression. Recognizes two classes of DNA response elements within the promoter of its target genes and can bind to DNA as either monomers or homodimers, depending on the nature of the response element. Binds as a monomer to a response element composed of the consensus half-site motif 5'-[A/G]GGTCA-3' preceded by an A/T-rich 5' sequence (RevRE), or as a homodimer to a direct repeat of the core motif spaced by two nuclegotides (RevDR-2). Acts as a potent competitive repressor of ROR alpha (RORA) function and also negatively regulates the expression of NR1D1. Regulates lipid and energy homeostasis in the skeletal muscle via repression of genes involved in lipid metabolism and myogenesis including: CD36, FABP3, FABP4, UCP3, SCD1 and MSTN. Regulates hepatic lipid metabolism via the repression of APOC3. Represses gene expression at a distance in macrophages by inhibiting the transcription of enhancer-derived RNAs (eRNAs). In addition to its activity as a repressor, can also act as a transcriptional activator. Acts as a transcriptional activator of the sterol regulatory element-binding protein 1 (SREBF1) and the inflammatory mediator interleukin-6 (IL6) in the skeletal muscle (By similarity). Plays a role in the regulation of circadian sleep/wake cycle, essential for maintaining wakefulness during the dark phase or active period (By similarity). Key regulator of skeletal

Target Details

	muscle mitochondrial function, negatively regulates the skeletal muscle expression of core clock genes and genes involved in mitochondrial biogenesis, fatty acid beta-oxidation and lipid metabolism (By similarity). May play a role in the circadian control of neutrophilic inflammation in the lung (By similarity). {ECO:0000250|UniProtKB:Q60674, ECO:0000269|PubMed:17892483, ECO:0000269|PubMed:17996965}.
Molecular Weight:	64.6 kDa
UniProt:	Q14995
Pathways:	Nuclear Receptor Transcription Pathway, Steroid Hormone Mediated Signaling Pathway

Application Details

Application Notes:	In addition to the applications listed above we expect the protein to work for functional studies as well. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Comment:	ALiCE®, our Almost Living Cell-Free Expression System is based on a lysate obtained from Nicotiana tabacum c.v.. This contains all the protein expression machinery needed to produce even the most difficult-to-express proteins, including those that require post-translational modifications. During lysate production, the cell wall and other cellular components that are not required for protein production are removed, leaving only the protein production machinery and the mitochondria to drive the reaction. During our lysate completion steps, the additional components needed for protein production (amino acids, cofactors, etc.) are added to produce something that functions like a cell, but without the constraints of a living system - all that's needed is the DNA that codes for the desired protein!
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer. If you have a special request, please contact us.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.

Handling

Expiry Date:	Unlimited (if stored properly)

Images

Image 1. „Crystallography Grade“ protein due to multi-step, protein-specific purification process