Datasheet for ABIN3079408

EGR2 Protein (AA 1-476) (Strep Tag)

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Overview

Quantity:	1 mg
Target:	EGR2
Protein Characteristics:	AA 1-476
Origin:	Human
Source:	Tobacco (Nicotiana tabacum)
Protein Type:	Recombinant
Purification tag / Conjugate:	This EGR2 protein is labelled with Strep Tag.
Application:	Western Blotting (WB), SDS-PAGE (SDS), ELISA

Product Details

Sequence:	MMTAKAVDKI PVTLSGFVHQ LSDNIYPVED LAATSVTIFP NAELGGPFDQ MNGVAGDGMI NIDMTGEKRS LDLPYPSSFA PVSAPRNQTF TYMGKFSIDP QYPGASCYPE GIINIVSAGI LQGVTSPAST TASSSVTSAS PNPLATGPLG VCTMSQTQPD LDHLYSPPPP PPPYSGCAGD LYQDPSAFLS AATTSTSSSL AYPPPPSYPS PKPATDPGLF PMIPDYPGFF PSQCQRDLHG TAGPDRKPFP CPLDTLRVPP PLTPLSTIRN FTLGGPSAGV TGPGASGGSE GPRLPGSSSA AAAAAAAAAY NPHHLPLRPI LRPRKYPNRP SKTPVHERPY PCPAEGCDRR FSRSDELTRH IRIHTGHKPF QCRICMRNFS RSDHLTTHIR THTGEKPFAC DYCGRKFARS DERKRHTKIH LRQKERKSSA PSASVPAPST ASCSGGVQPG GTLCSSNSSS LGGGPLAPCS SRTRTP **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. 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.

Product Details

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:	EGR2
Alternative Name:	EGR2 (EGR2 Products)
Background:	E3 SUMO-protein ligase EGR2 (EC 2.3.2.-) (AT591) (E3 SUMO-protein transferase ERG2) (Early growth response protein 2) (EGR-2) (Zinc finger protein Krox-20),FUNCTION: Sequence-specific DNA-binding transcription factor (PubMed:17717711). Plays a role in hindbrain segmentation by regulating the expression of a subset of homeobox containing genes and in Schwann cell myelination by regulating the expression of genes involved in the formation and maintenance of myelin (By similarity). Binds to two EGR2-consensus sites EGR2A (5'-CTGTAGGAG-3') and EGR2B (5'-ATGTAGGTG-3') in the HOXB3 enhancer and promotes HOXB3 transcriptional activation (By similarity). Binds to specific DNA sites located in the promoter region of HOXA4, HOXB2 and ERBB2 (By similarity). Regulates hindbrain segmentation by controlling the expression of Hox genes, such as HOXA4, HOXB3 and HOXB2, and thereby specifying odd and even rhombomeres (By similarity). Promotes the expression of HOXB3 in the rhombomere r5 in the hindbrain (By similarity). Regulates myelination in the peripheral nervous system after birth, possibly by regulating the expression of myelin proteins, such as MPZ, and by promoting the differentiation of Schwann cells (By similarity). Involved in the development of the jaw openener musculature, probably by playing a role in its innervation through trigeminal motor neurons (By similarity). May play a role in adipogenesis, possibly by regulating the expression of CEBPB (By similarity). {ECO:0000250|UniProtKB:P08152, ECO:0000269|PubMed:17717711}., FUNCTION: E3 SUMO-protein ligase helping SUMO1 conjugation to its coregulators NAB1 and NAB2, whose sumoylation down-regulates EGR2 transcriptional activity. {ECO:0000269|PubMed:21836637}.
Molecular Weight:	50.3 kDa
UniProt:	P11161

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.

Application Details

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.
Expiry Date:	Unlimited (if stored properly)

Images

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