

Datasheet for ABIN3081457

HMOX1 Protein (AA 1-288) (Strep Tag)



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Overview

Quantity:	250 µg
Target:	HMOX1
Protein Characteristics:	AA 1-288
Origin:	Human
Source:	Cell-free protein synthesis (CFPS)
Protein Type:	Recombinant
Purification tag / Conjugate:	This HMOX1 protein is labelled with Strep Tag.
Application:	SDS-PAGE (SDS), Western Blotting (WB), ELISA

Product Details

Sequence:	MERPQPDSMP QDLSEALKEA TKEVHTQAEN AEFMRNFQKG QVTRDGFKLV MASLYHIYVA LEEEIERNKE SPVFAPVYFP EELHRKAALE QDLAFWYGPR WQEVIPYTPA MQRVYVKRLHE VGRTEPELLV AHAYTRYLGD LSGGQVLKKI AQKALDLPSS GEGLAFFTFP NIASATKFKQ LYRSRMNSLE MTPAVRQRVI EEAKTAFLLN IQLFEELQEL LTHDTKDQSP SRAPGLRQRA SNKVQDSAPV ETPRGKPLPN TRSQAPLLRW VLTLSFLVAT VAVGLYAM Sequence without tag. The proposed Strep-Tag is based on experience with the expression system. Our team may suggest an additional tag depending on the complexity of the protein. If 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 in one-step affinity chromatography • State-of-the-art algorithm used for plasmid design (Gene synthesis).

This protein is a predefined custom protein and will be made for the first time for your order. Our experts in the lab try to ensure that you receive soluble protein.

The big advantage of ordering our predefined custom 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 against its specific reference buffer.
- We use the Expasy's ProtParam tool to determine the absorption coefficient of each protein.

Purification:	One-step Strep-tag purification of proteins expressed in Almost Living Cell-Free Expression System (ALiCE®).
Purity:	approximately 70-80 % as determined by SDS PAGE, Western Blot and analytical SEC (HPLC).
Grade:	custom-made

Target Details

Target:	HMOX1
Alternative Name:	HMOX1 (HMOX1 Products)
Background:	Heme oxygenase 1 (HO-1) (EC 1.14.14.18) [Cleaved into: Heme oxygenase 1 soluble form],FUNCTION: [Heme oxygenase 1]: Catalyzes the oxidative cleavage of heme at the alpha-methene bridge carbon, released as carbon monoxide (CO), to generate biliverdin IXalpha, while

Target Details

releasing the central heme iron chelate as ferrous iron (PubMed:7703255, PubMed:11121422, PubMed:19556236). Affords protection against programmed cell death and this cytoprotective effect relies on its ability to catabolize free heme and prevent it from sensitizing cells to undergo apoptosis (PubMed:20055707). {ECO:0000269|PubMed:11121422, ECO:0000269|PubMed:19556236, ECO:0000269|PubMed:7703255, ECO:0000303|PubMed:20055707}., FUNCTION: [Heme oxygenase 1]: (Microbial infection) During SARS-CoV-2 infection, promotes SARS-CoV-2 ORF3A-mediated autophagy but is unlikely to be required for ORF3A-mediated induction of reticulophagy. {ECO:0000269|PubMed:35239449}., FUNCTION: [Heme oxygenase 1 soluble form]: Catalyzes the oxidative cleavage of heme at the alpha-methene bridge carbon, released as carbon monoxide (CO), to generate biliverdin IXalpha, while releasing the central heme iron chelate as ferrous iron. {ECO:0000269|PubMed:7703255}.

Molecular Weight: 32.8 kDa

UniProt: [P09601](#)

Pathways: [Transition Metal Ion Homeostasis](#), [Regulation of Leukocyte Mediated Immunity](#), [Positive Regulation of Immune Effector Process](#), [Production of Molecular Mediator of Immune Response](#), [SARS-CoV-2 Protein Interactome](#)

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.

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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. Standard Storage Buffer: PBS pH 7.4, 10 % Glycerol Might differ depending on protein.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months