

Datasheet for ABIN3102208

FA2H Protein (AA 1-372) (Strep Tag)[Go to Product page](#)**1** Image

Overview

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|-------------------------------|-----------------------------------------------|
| Quantity: | 1 mg |
| Target: | FA2H |
| Protein Characteristics: | AA 1-372 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This FA2H protein is labelled with Strep Tag. |
| Application: | ELISA, Western Blotting (WB), SDS-PAGE (SDS) |

Product Details

Sequence: MAPAPPPAAS FSPSEVQRRRL AAGACWVRRG ARLYDLSSFV RHHPGGEQLL RARAGQDISA
DLDGPPHRHS ANARRWLEQY YVGELRGEQQ GSMENEPVAL EETQKTDPM EPRFKVVDWD
KDLVDWRKPL LWQVGHLGEK YDEWVHQPVT RPIRLFHSDL IEGLSKTVWY SVPIIWVPLV
LYLSWSYYRT FAQGNVRLFT SFTTEYTVAV PKSMFPGLFM LGTFLWSLIE YLIHRFLFHM
KPPSDSYILI MLHFVMHGQH HKAPFDGSRL VFPPVPASLV IGVFYLCMQL ILPEAVGGTV
FAGGLLGYVL YDMTHYYLHF GSPHKGSYLY SLKAHHVKHH FAHQKSGFGI STKLWDYCFH
TLTPEKPHLK TQ

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.

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| Characteristics: | Key Benefits: |
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- 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

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| 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

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| Target: | FA2H |
| Alternative Name: | FA2H (FA2H Products) |
| Background: | <p>Fatty acid 2-hydroxylase (EC 1.14.18.-) (Fatty acid alpha-hydroxylase) (Fatty acid hydroxylase domain-containing protein 1),FUNCTION: Catalyzes the hydroxylation of free fatty acids at the C-2 position to produce 2-hydroxy fatty acids, which are building blocks of sphingolipids and glycosphingolipids common in neural tissue and epidermis (PubMed:15337768, PubMed:15863841, PubMed:17355976, PubMed:22517924). FA2H is stereospecific for the production of (R)-2-hydroxy fatty acids (PubMed:22517924). Plays an essential role in the synthesis of galactosphingolipids of the myelin sheath (By similarity). Responsible for the synthesis of sphingolipids and glycosphingolipids involved in the formation of epidermal lamellar bodies critical for skin permeability barrier (PubMed:17355976). Participates in the synthesis of glycosphingolipids and a fraction of type II wax diesters in sebaceous gland, specifically regulating hair follicle homeostasis (By similarity). Involved in the synthesis of sphingolipids of plasma membrane rafts, controlling lipid raft mobility and trafficking of raft-associated proteins (By similarity). {ECO:0000250 UniProtKB:Q5MPP0, ECO:0000269 PubMed:15337768, ECO:0000269 PubMed:15863841, ECO:0000269 PubMed:17355976, ECO:0000269 PubMed:22517924}.</p> |
| Molecular Weight: | 42.8 kDa |
| UniProt: | Q7L5A8 |

Application Details

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| 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 <i>Nicotiana tabacum</i> 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 |

Application Details

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

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| 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