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Datasheet for ABIN3119305

NHE8 Protein (AA 1-581) (Strep Tag)

1 Image

Overview

| | |
|-------------------------------|---|
| Quantity: | 1 mg |
| Target: | NHE8 (SLC9A8) |
| Protein Characteristics: | AA 1-581 |
| Origin: | Human |
| Source: | Tobacco (Nicotiana tabacum) |
| Protein Type: | Recombinant |
| Purification tag / Conjugate: | This NHE8 protein is labelled with Strep Tag. |
| Application: | ELISA, SDS-PAGE (SDS), Western Blotting (WB) |

Product Details

Sequence: MGEKMAEEER FPNTTHEGFN VTLHTTLVVT TKLVLPTPGK PILPVQTGEQ AQQEEQSSGM
TIFFSLLVLA ICIILVHLI RYRLHFLPES VAVVSLGILM GAVIKIIEFK KLANWKEEEM FRPNMFFLL
LPPIIFESGY SLHKGNFQNG IGSITLFAVF GTAISAFVVG GGIYFLGQAD VISKLNMTDS
FAFGSLISAV DPVATIAIFN ALHVDPLVNM LVFGESILND AVSIVLTNTA EGLTRKNMSD
VSGWQTFLLQA LDYFLKMFFG SAALGTLTGL ISALVLKHID LRKTPSLEFG MMIIIFAYLPY
GLAEGISLSG IMAILFSGIV MSHYTHHNS PVTQILMQQT LRTVAFLCET CVFAFLGLSI
FSFPHKFEIS FVIWCIVLVL FGRAVNIFPL SYLLNFFRDH KITPKMMFIM WFSGLRGAIP
YALSLHLDLE PMEKRQLIGT TTIVIVLFTI LLLGGSTMPL IRLMDIEDAK AHRRNKKDVN
LSKTEKMGNT VESEHSELTE EEEYEAHYIR RQDLKGFVWL DAKYLNPFPT RRLTQEDLHH
GRIQMKTLTN KWYEEVRQGP SGSEDDEQEL L

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.

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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: NHE8 (SLC9A8)

Alternative Name: SLC9A8 ([SLC9A8 Products](#))

Background: Sodium/hydrogen exchanger 8 (Na(+)/H(+) exchanger 8) (NHE-8) (Solute carrier family 9 member 8),FUNCTION: Na(+)/H(+) antiporter. Mediates the electoneutral exchange of intracellular H(+) ions for extracellular Na(+) in 1:1 stoichiometry (PubMed:15522866). Acts as an Na(+)/H(+) exchanger in the trans-Golgi. Contributes to the regulation of pH regulation of Golgi apparatus, and consequently, in protein trafficking and endosomal morphology (PubMed:15522866, PubMed:20719963). In germ cells, plays a crucial role in acrosome biogenesis and sperm development, probably by playing a role in the fusion of the Golgi-derived vesicles that form the acrosomal cap (By similarity). Can also be active at the cell surface of specialized cells. In the small intestine, at the cell membrane, plays a major physiological role in transepithelial absorption of Na(+) and regulates intracellular pH homeostasis of intestinal epithelial cells (PubMed:34288721). Acts as an important regulator of mucosal integrity in the intestine and in the stomach, could mediate the pH fluctuation necessary for mucin exocytosis or assist membrane trafficking of other proteins (By similarity). Plays a role in photoreceptor survival and in the maintenance of intracellular pH homeostasis in retinal pigment epithelium (RPE cells) (By similarity). {ECO:0000250|UniProtKB:Q8R4D1, ECO:0000269|PubMed:15522866, ECO:0000269|PubMed:20719963, ECO:0000269|PubMed:34288721}.

Molecular Weight: 65.4 kDa

UniProt: [Q9Y2E8](#)

Pathways: [Proton Transport](#)

Application Details

Application Notes: In addition to the applications listed above we expect the protein to work for functional studies

Application Details

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.

Expiry Date: Unlimited (if stored properly)



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