Datasheet for ABIN7547527

FADS3 Protein (AA 1-445) (His tag)

Go to Product page

Overview

Quantity:	1 mg
Target:	FADS3
Protein Characteristics:	AA 1-445
Origin:	Human
Source:	HEK-293 Cells
Protein Type:	Recombinant
Purification tag / Conjugate:	This FADS3 protein is labelled with His tag.

Product Details

Purpose:	Custom-made recombinant FADS3 Protein expressed in mammalian cells.
Sequence:	MGGVGEPGPR EGPAQPGAPL PTFCWEQIRA HDQPGDKWLV IERRVYDISR WAQRHPGGSR LIGHHGAEDA TDAFRAFHQD LNFVRKFLQP LLIGELAPEE PSQDGPLNAQ LVEDFRALHQ AAEDMKLFDA SPTFFAFLLG HILAMEVLAW LLIYLLGPGW VPSALAAFIL AISQAQSWCL QHDLGHASIF KKSWWNHVAQ KFVMGQLKGF SAHWWNFRHF QHHAKPNIFH KDPDVTVAPV FLLGESSVEY GKKKRRYLPY NQQHLYFFLI GPPLLTLVNF EVENLAYMLV CMQWADLLWA ASFYARFFLS YLPFYGVPGV LLFFVAVRVL ESHWFVWITQ MNHIPKEIGH EKHRDWVSSQ LAATCNVEPS LFTNWFSGHL NFQIEHHLFP RMPRHNYSRV APLVKSLCAK HGLSYEVKPF LTALVDIVRS LKKSGDIWLD AYLHQ **Sequence without tag. The proposed Purification-Tag is based on experiences 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.**
Specificity:	If you are looking for a specific domain and are interested in a partial protein or a different isoform, please contact us regarding an individual offer.

Product Details

Characteristics:	Key Benefits: • Made to order protein - from design to production - by highly experienced protein experts. • Protein expressed in mammalian cells and purified in one-step affinity chromatography • The optimized expression system ensures reliability for intracellular, secreted and transmembrane proteins. • 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 try to ensure that you receive soluble protein. If you are not interested in a full length protein, please contact us for individual protein fragments. 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.
Purity:	> 90 % as determined by Bis-Tris PAGE, anti-tag ELISA, Western Blot and analytical SEC (HPLC)
Grade:	custom-made

Target Details

Target:	FADS3
Alternative Name:	FADS3 (FADS3 Products)
Background:	Fatty acid desaturase 3 (FADS3) (EC 1.14.19.-) (Delta(13) fatty acid desaturase) (Delta(13) desaturase),FUNCTION: Mammals have different sphingoid bases that differ in their length and/or pattern of desaturation and hydroxyl groups. The predominant sphingoid base that comprises mammalian ceramides is sphing-4-enine (sphingosine or SPH) which has a trans (E) desaturation at carbon 4 (PubMed:31916624, PubMed:31862735). FADS3 is a desaturase that introduces a cis (Z) double bond between carbon 14 and carbon 15 of the sphingoid base (also known as long chain base, LCB), producing LCBs such as sphinga-4,14-dienine (SPD, d18:2(4E,14Z)) from SPH (PubMed:31916624, PubMed:31862735, PubMed:37209771). Prefers SPH-containing ceramides (N-acylsphing-4-enines) as substrates (PubMed:31916624, PubMed:31862735, PubMed:37209771). Capable of metabolizing also the SPH in its free form (PubMed:31862735). SPD ceramides occur widely in mammalian tissues and cells (PubMed:31916624). Due to their unusual structure containing a cis double bond, SPD ceramides may have an opposite, negative role in lipid microdomain formation relative to

Target Details

	conventional ceramides (PubMed:31916624). Could be involved in the detoxification of 1-deoxy sphingolipids, by desaturating the cytotoxic 1-deoxysphinganine (1-deoxySA, m18:0), produced under pathological conditions, to 1-deoxysphingenine (1-deoxysphingosine, 1-deoxySO, m18:1) (Probable). Although prefers SPH-containing ceramides (N-acylsphing-4-enines) as substrates, it also exhibits activity toward dihydrosphingosine-containing CERs (N-acylsphinganines) and produces 14Z-SPH-containing sphingolipids,which can be found in patients with DEGS1 mutations (PubMed:37209771). Its desaturase mechanism involves an electron transfer facilitated by cytochrome b5 (PubMed:37209771). FADS3 also acts as a methyl-end fatty acyl coenzyme A (CoA) desaturase that introduces a cis double bond between the preexisting double bond and the terminal methyl group of the fatty acyl chain (By similarity). Desaturates (11E)-octadecenoate (trans-vaccenoate, the predominant trans fatty acid in human milk) at carbon 13 to generate (11E,13Z)-octadecadienoate (also known as conjugated linoleic acid 11E,13Z-CLA) (By similarity). {ECO:0000250|UniProtKB:Q8K1P9, ECO:0000269|PubMed:31862735, ECO:0000269|PubMed:31916624, ECO:0000269|PubMed:37209771, ECO:0000305|PubMed:31862735}.
Molecular Weight:	51.1 kDa
UniProt:	Q9Y5Q0

Application Details

Application Notes:	We expect the protein to work for functional studies. As the protein has not been tested for functional studies yet we cannot offer a guarantee though.
Restrictions:	For Research Use only

Handling

Format:	Liquid
Buffer:	The buffer composition is at the discretion of the manufacturer.
Handling Advice:	Avoid repeated freeze-thaw cycles.
Storage:	-80 °C
Storage Comment:	Store at -80°C.
Expiry Date:	12 months