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Fads3 Antibody - N-terminal region

Rabbit Polyclonal Antibody
Catalog # AI13061

Product Information

Application	WB
Primary Accession	Q8K1P9
Other Accession	NM_173137, NP_775160
Reactivity	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine
Predicted	Human, Mouse, Rat, Rabbit, Pig, Dog, Guinea Pig, Horse, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	51467

Additional Information

Gene ID	286922
Other Names	Fatty acid desaturase 3, 1.14.19.-, Fads3
Format	Liquid. Purified antibody supplied in 1x PBS buffer with 0.09% (w/v) sodium azide and 2% sucrose.
Reconstitution & Storage	Add 50 ul of distilled water. Final anti-Fads3 antibody concentration is 1 mg/ml in PBS buffer with 2% sucrose. For longer periods of storage, store at 20°C. Avoid repeat freeze-thaw cycles.
Precautions	Fads3 Antibody - N-terminal region is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

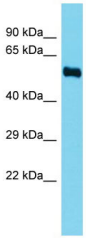
Name	Fads3 {ECO:0000303|PubMed:19752397, ECO:0000303|PubMed:24070791}
Function	Mammals have different sphingoid bases that differ in their length and/or pattern of desaturation and hydroxyl groups. The predominant sphingoid base that comprises mammalian ceramides is sphing-4-enine (sphingosine or SPH) which has a trans (E) desaturation at carbon 4. 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. Prefers SPH-containing ceramides (N- acylsphing-4-enines) as substrates. Capable of metabolizing also the SPH in its free form. SPD ceramides occur widely in mammalian tissues and cells. Due to their unusual structure containing a cis double bond, SPD ceramides may have an opposite, negative role in lipid microdomain formation relative to conventional ceramides. 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). 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. Its desaturase mechanism involves an electron transfer facilitated by cytochrome b5 (By similarity). 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. 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) (PubMed:24070791, PubMed:30262139).
Cellular Location	Endoplasmic reticulum membrane {ECO:0000250|UniProtKB:Q9Y5Q0}; Multi-pass membrane protein
Tissue Location	Essentially expressed in liver and kidney and to a lesser extent in heart, adipose tissue, stomach and pancreas (at protein level) (PubMed:19752397). Higher expression in lactating mammary gland than in liver (PubMed:30262139)

References

D'Andrea S.,et al.Submitted (JUL-2002) to the EMBL/GenBank/DDBJ databases.

Images



Host: Rabbit
Target Name: Fads3
Sample Tissue: Rat Kidney lysates
Antibody Dilution: 1.0µg/ml