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FADS2 Antibody (N-term) Blocking peptide
Synthetic peptide
Catalog # BP12296a

Specification

FADS2 Antibody (N-term) Blocking peptide - Product Information

Primary Accession O95864

FADS2 Antibody (N-term) Blocking peptide - Additional Information

Gene ID 9415

Other Names
Fatty acid desaturase 2, 11419-, Delta(6) fatty acid desaturase, D6D, Delta(6) desaturase, Delta-6 desaturase, FADS2

Format
Peptides are lyophilized in a solid powder format. Peptides can be reconstituted in solution using the appropriate buffer as needed.

Storage
Maintain refrigerated at 2-8°C for up to 6 months. For long term storage store at -20°C.

Precautions
This product is for research use only. Not for use in diagnostic or therapeutic procedures.

FADS2 Antibody (N-term) Blocking peptide - Protein Information

Name FADS2 (HGNC:3575)

Function
Involved in the biosynthesis of highly unsaturated fatty acids (HUFA) from the essential polyunsaturated fatty acids (PUFA) linoleic acid (LA) (18:2n-6) and alpha-linolenic acid (ALA) (18:3n-3) precursors, acting as a fatty acyl-coenzyme A (CoA) desaturase that introduces a cis double bond at carbon 6 of the fatty acyl chain. Catalyzes the first and rate limiting step in this pathway which is the desaturation of LA (18:2n-6) and ALA (18:3n-3) into gamma-linoleate (GLA) (18:3n-6) and stearidonate (18:4n-3), respectively (PubMed:12713571). Subsequently, in the biosynthetic pathway of HUFA n- 3 series, it desaturates tetracosapentaenoate (24:5n-3) to tetracosahexaenoate (24:6n-3), which is then converted to docosahexaenoate (DHA)(22:6n-3), an important lipid for nervous system function (By similarity). Desaturates hexadecanate (palmitate) to produce 6Z-hexadecenoate (sapienate), a fatty acid unique to humans and major component of human sebum, that has been implicated in the development of acne and may have potent antibacterial activity (PubMed:12713571). It can also desaturate (11E)-octadecenoate (trans- vaccenoate, the predominant trans fatty acid in human milk) at carbon 6 generating (6Z,11E)-octadecadienoate (By similarity). In addition to Delta-6 activity, this enzyme exhibits Delta-8 activity with slight biases toward n-3 fatty acyl-CoA

substrates (By similarity).

Cellular Location
Endoplasmic reticulum membrane; Multi-pass membrane protein

Tissue Location
Expressed in a wide array of tissues, highest expression is found in liver followed by brain, lung, heart, and retina. A lower level is found in breast tumor when compared with normal tissues; lowest levels were found in patients with poor prognostic index.

FADS2 Antibody (N-term) Blocking peptide - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Blocking Peptides

FADS2 Antibody (N-term) Blocking peptide - Images

FADS2 Antibody (N-term) Blocking peptide - Background

The protein encoded by this gene is a member of the fattyacid desaturase (FADS) gene family. Desaturase enzymes regulateunsaturation of fatty acids through the introduction of doublebonds between defined carbons of the fatty acyl chain. FADS familymembers are considered fusion products composed of an N-terminalcytochrome b5-like domain and a C-terminal multiplemembrane-spanning desaturase portion, both of which arecharacterized by conserved histidine motifs. This gene is clusteredwith family members FADS1 and FADS2 at 11q12-q13.1; this cluster isthought to have arisen evolutionarily from gene duplication basedon its similar exon/intron organization.

FADS2 Antibody (N-term) Blocking peptide - References

Bailey, S.D., et al. Diabetes Care 33(10):2250-2253(2010)Mathias, R.A., et al. J. Lipid Res. 51(9):2766-2774(2010)Lu, Y., et al. Am. J. Clin. Nutr. 92(1):258-265(2010)Zabaneh, D., et al. PLoS ONE 5 (8), E11961 (2010) :Steer, C.D., et al. PLoS ONE 5 (7), E11570 (2010) :