



SZABO SCANDIC

Part of Europa Biosite

Produktinformation



Forschungsprodukte & Biochemikalien



Zellkultur & Verbrauchsmaterial



Diagnostik & molekulare Diagnostik



Laborgeräte & Service

Weitere Information auf den folgenden Seiten!
See the following pages for more information!



Lieferung & Zahlungsart

siehe unsere [Liefer- und Versandbedingungen](#)

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

[linkedin.com/company/szaboscandic](https://www.linkedin.com/company/szaboscandic) 



Fatty Acid 2-hydrolase (Fa2H). Rabbit Polyclonal Antibody

BACKGROUND

2-Hydroxysphingolipids are a subset of sphingolipids containing 2-hydroxy fatty acids. The 2-hydroxylation occurs during de novo ceramide synthesis and is catalyzed by fatty acid 2-hydroxylase (also known as fatty acid alpha-hydroxylase). In mammals, 2-hydroxysphingolipids are present abundantly in brain because the major myelin lipids galactosylceramides and sulfatides contain 2-hydroxy fatty acids. Here we report identification and characterization of a human gene that encodes a fatty acid 2-hydroxylase. Data base searches revealed a human homologue of the yeast ceramide 2-hydroxylase gene (FAH1), which we named FA2H. The FA2H gene encodes a 372-amino acid protein with 36% identity and 46% similarity to yeast Fah1p. The amino acid sequence indicates that FA2H protein contains an N-terminal cytochrome b5 domain and four potential transmembrane domains. FA2H also contains the iron-binding histidine motif conserved among membrane-bound desaturases/hydroxylases. COS7 cells expressing human FA2H contained 3-20-fold higher levels of 2-hydroxyceramides (C16, C18, C24, and C24:1) and 2-hydroxy fatty acids compared with control cells. Microsomal fractions prepared from transfected COS7 cells showed tetracosanoic acid 2-hydroxylase activities in an NADPH- and NADPH: cytochrome P-450 reductase-dependent manner. FA2H lacking the N-terminal cytochrome b5 domain had little activity, indicating that this domain is a functional component of this enzyme. Northern blot analysis showed that the FA2H gene is highly expressed in brain and colon tissues. These results demonstrate that the human FA2H gene encodes a fatty acid 2-hydroxylase. FA2H is likely involved in the formation of myelin 2-hydroxy galactosylceramides and -sulfatides.

IMMUNOGEN

Synthetic peptide derived from human fatty acid 2-hydrolase (FA2H) protein.

POSITIVE CONTROL/TISSUE EXPRESSION

Pancreas

COMMENTS

Antibody can be used for Western blotting (5-10 $\mu\text{g/ml}$) and ELISA. Other applications no tested. Optimal concentration should be evaluated by serial dilutions.

ORDERING INFORMATION

CATALOG NUMBER

X1698P

SIZE

100 μg

FORM

Unconjugated

HOST/CLONE

Rabbit

FORMULATION

Provided as solution in phosphate buffered saline with 0.08% sodium azide

CONCENTRATION

See vial for concentration

ISOTYPE

N/A

APPLICATIONS

Western Blot

SPECIES REACTIVITY

Human

ACCESSION NUMBER

Q7L5A8, Human

PURIFICATION

Ammonium Sulfate Precipitation

SHIP CONDITIONS

Ship at ambient temperature, freeze upon arrival

STORAGE CUSTOMER

Product should be stored at -20°C. Aliquot to avoid freeze/thaw cycles

STABILITY

Products are stable for one year from purchase when stored properly

REFERENCES

1. Alderson NL, Walla MD, Hama H. A novel method for the measurement of in vitro fatty acid 2-hydroxylase activity by gas chromatography-mass spectrometry. *J Lipid Res.* 2005 Jul;46(7):1569-75. Epub 2005 May 1.
2. Eckhardt M, Yaghootfam A, Fewou SN, Zoller I, Gieselmann V. A mammalian fatty acid hydroxylase responsible for the formation of alpha-hydroxylated galactosylceramide in myelin. *Biochem J.* 2005 May 15;388(Pt 1):245-54.
3. Alderson NL, Rembiesa BM, Walla MD, Bielawska A, Bielawski J, Hama H. The human FA2H gene encodes a fatty acid 2-hydroxylase. *J Biol Chem.* 2004 Nov 19;279(47):48562-8. Epub 2004 Aug 27.