

FAAH (m2): 293T Lysate: sc-125319

BACKGROUND

FAAH is a membrane-bound enzyme fatty acid amide hydrolase responsible for the hydrolysis of multiple primary and secondary fatty acid amides, including the neuromodulatory compounds anandamine and oleamide. The degradation of anandamide to arachidonic acid and oleamide to oleic acid terminates the signaling function of these molecules. FAAH degrades amides and esters with equivalent catalytic efficiency, enabling FAAH to function effectively as both an amidase and esterase. FAAH contributes to anandamide uptake by creating and maintaining an inward concentration gradient for anandamide. A natural single nucleotide polymorphism mutation in human FAAH in its homozygous form is strongly associated with problem drug use. This results in a missense mutation (385C→A) that converts a conserved proline residue to threonine (Pro 129→Thr), producing an FAAH variant that displays normal catalytic properties but enhanced sensitivity to proteolytic degradation. Genetic mutations in FAAH constitute an important risk factor for problem drug use. The human FAAH gene maps to chromosome 1p33.

REFERENCES

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2. Giang, D.K. and Cravatt, B.F. 1997. Molecular characterization of human and mouse fatty acid amide hydrolases. *Proc. Natl. Acad. Sci. USA* 6: 2238-2242.
3. Patricelli, M.P. and Cravatt, B.F. 1999. Fatty acid amide hydrolase competitively degrades bioactive amides and esters through a nonconventional catalytic mechanism. *Biochemistry* 43: 14125-14130.
4. Day, T.A., Rakhshan, F., Deutsch, D.G. and Barker, E.L. 2001. Role of fatty acid amide hydrolase in the transport of the endogenous cannabinoid anandamide. *Mol. Pharmacol.* 6: 1369-1375.
5. Sipe, J.C., Ciang, K., Gerber, A.L., Beutler, E. and Cravatt, B.F. 2002. A missense mutation in human fatty acid amide hydrolase associated with problem drug use. *Proc. Natl. Acad. Sci. USA* 12: 8394-9399.
6. Online Mendelian Inheritance in Man, OMIM™. 2003. Johns Hopkins University, Baltimore, MD. MIM Number: 602935. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>

CHROMOSOMAL LOCATION

Genetic locus: Faah (mouse) mapping to 4 D1.

PRODUCT

FAAH (m2): 293T Lysate represents a lysate of mouse FAAH transfected 293T cells and is provided as 100 µg protein in 200 µl SDS-PAGE buffer.

STORAGE

Store at -20° C. Repeated freezing and thawing should be minimized. Sample vial should be boiled once prior to use. Non-hazardous. No MSDS required.

APPLICATIONS

FAAH (m2): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive FAAH antibodies. Recommended use: 10-20 µl per lane.

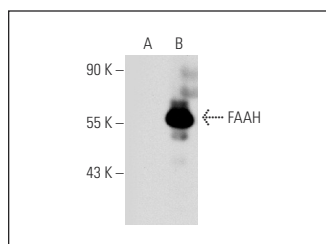
Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

FAAH (27-Y): sc-100739 is recommended as a positive control antibody for Western Blot analysis of enhanced mouse FAAH expression in FAAH transfected 293T cells (starting dilution 1:100, dilution range 1:100-1:1,000).

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended:
 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048.

DATA



FAAH (27-Y): sc-100739. Western blot analysis of FAAH expression in non-transfected: sc-117752 (A) and mouse FAAH transfected: sc-125319 (B) 293T whole cell lysates.

RESEARCH USE

For research use only, not for use in diagnostic procedures.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.