

FAAH (H-50): sc-366008

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 (Pro129→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.

CHROMOSOMAL LOCATION

Genetic locus: FAAH (human) mapping to 1p33; Faah (mouse) mapping to 4 D1.

SOURCE

FAAH (H-50) is a rabbit polyclonal antibody raised against amino acids 481-530 mapping near the C-terminus of FAAH of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

APPLICATIONS

FAAH (H-50) is recommended for detection of FAAH of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

FAAH (H-50) is also recommended for detection of FAAH in additional species, including equine, canine and porcine.

Suitable for use as control antibody for FAAH siRNA (h): sc-106807, FAAH siRNA (m): sc-145000, FAAH shRNA Plasmid (h): sc-106807-SH, FAAH shRNA Plasmid (m): sc-145000-SH, FAAH shRNA (h) Lentiviral Particles: sc-106807-V and FAAH shRNA (m) Lentiviral Particles: sc-145000-V.

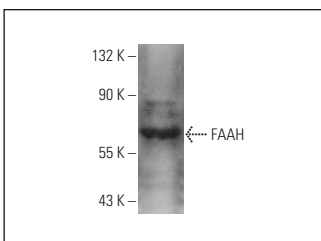
Molecular Weight of FAAH: 67 kDa.

Positive Controls: rat brain extract: sc-2392.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



FAAH (H-50): sc-366008. Western blot analysis of FAAH expression in rat brain tissue extract.

RESEARCH USE

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

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Try **FAAH (27-Y): sc-100739**, our highly recommended monoclonal alternative to FAAH (H-50).