

ABHD12 (N-15): sc-85252

BACKGROUND

The α/β hydrolase superfamily comprise diverse members that are involved in important biochemical processes and related to various diseases. They have unrelated sequences, various substrates and different kinds of catalytic activities, yet they share the same canonical α/β hydrolase fold, which consists of an eight stranded parallel α/β structure. They are also characterized by a catalytic triad composed of a histidine, an acid and a nucleophile. Members of this superfamily are often drug targets for treating diseases, such as diabetes, Alzheimer's disease, obesity and blood clotting disorders. The α/β hydrolase domain containing (ABHD) gene subfamily is comprised of 15 mostly uncharacterized members, most of which utilize a serine nucleophile to form the G-X-S-X-G nucleophile elbow. ABHD1 plays a role in metabolizing smoking xenobiotics. ABHD2 participates in the development of atherosclerosis. ABHD4 is involved in an alternative synthesis pathway of NAE. Mutations in ABHD5 contribute to Chanarin-Dorfman syndrome. ABHD6 may play a role in nervous system metabolism and signaling. ABHD12 is a 398 amino acid protein that exists as 2 alternatively spliced isoforms.

REFERENCES

- Ollis, D.L., et al. 1992. The α/β hydrolase fold. *Protein Eng.* 5: 197-211.
- Holmquist, M. 2000. α/β -hydrolase fold enzymes: structures, functions and mechanisms. *Curr. Protein Pept. Sci.* 1: 209-235.
- Lefèvre, C., et al. 2001. Mutations in CGI-58, the gene encoding a new protein of the esterase/lipase/thioesterase subfamily, in Chanarin-Dorfman syndrome. *Am. J. Hum. Genet.* 69: 1002-1012.
- Edgar, A.J., et al. 2002. Cloning and tissue distribution of three murine α/β hydrolase fold protein cDNAs. *Biochem. Biophys. Res. Commun.* 292: 617-625.
- Simon, G.M., et al. 2006. Endocannabinoid biosynthesis proceeding through glycerophospho-N-acyl ethanolamine and a role for α/β -hydrolase 4 in this pathway. *J. Biol. Chem.* 281: 26465-26472.
- Miyata, K., et al. 2008. Elevated mature macrophage expression of human ABHD2 gene in vulnerable plaque. *Biochem. Biophys. Res. Commun.* 365: 207-213.

CHROMOSOMAL LOCATION

Genetic locus: ABHD12 (human) mapping to 20p11.21; Abhd12 (mouse) mapping to 2 G3.

SOURCE

ABHD12 (N-15) is an affinity purified rabbit polyclonal antibody raised against a peptide mapping at the N-terminus of ABHD12 of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-85252 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

ABHD12 (N-15) is recommended for detection of ABHD12 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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); non cross-reactive with ABHD3, ABHD4, and ABHD13.

ABHD12 (N-15) is also recommended for detection of ABHD12 in additional species, including canine and bovine.

Suitable for use as control antibody for ABHD12 siRNA (h): sc-72416, ABHD12 siRNA (m): sc-140766, ABHD12 shRNA Plasmid (h): sc-72416-SH, ABHD12 shRNA Plasmid (m): sc-140766-SH, ABHD12 shRNA (h) Lentiviral Particles: sc-72416-V and ABHD12 shRNA (m) Lentiviral Particles: sc-140766-V.

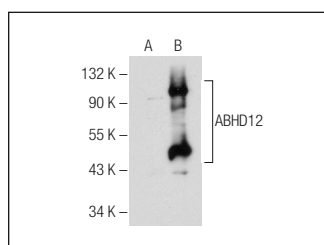
Molecular Weight of ABHD12: 45 kDa.

Positive Controls: ABHD12 (h): 293T Lysate: sc-371340.

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



ABHD12 (N-15): sc-85252. Western blot analysis of ABHD12 expression in non-transfected: sc-117752 (A) and human ABHD12 transfected: sc-371340 (B) 293T whole cell lysates.

STORAGE

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

RESEARCH USE

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