

# ABHD3 (S-16): sc-84681

## BACKGROUND

The  $\alpha/\beta$  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  $\alpha/\beta$  hydrolase fold, which consists of an eight stranded parallel  $\alpha/\beta$  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  $\alpha/\beta$  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. ABHD3 is a 409 amino acid single-pass type II membrane protein. ABHD4 is involved in an alternative synthesis pathway of NAE (N-acyl ethanolamine). Mutations in ABHD5 contribute to Chanarin-Dorfman syndrome. ABHD6 may play a role in nervous system metabolism and signaling.

## REFERENCES

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- Holmquist, M. 2000.  $\alpha/\beta$ -hydrolase fold enzymes: structures, functions and mechanisms. *Curr. Protein Pept. Sci.* 1: 209-235.
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- Miyata, K., et al. 2008. Elevated mature macrophage expression of human ABHD2 gene in vulnerable plaque. *Biochem. Biophys. Res. Commun.* 365: 207-213.
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## CHROMOSOMAL LOCATION

Genetic locus: ABHD3 (human) mapping to 18q11.2; Abhd3 (mouse) mapping to 18 A1.

## SOURCE

ABHD3 (S-16) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ABHD3 of human origin.

## STORAGE

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

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-84681 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

ABHD3 (S-16) is recommended for detection of ABHD3 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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 ABHD4 and ABHD13.

ABHD3 (S-16) is also recommended for detection of ABHD3 in additional species, including equine, canine and bovine.

Suitable for use as control antibody for ABHD3 siRNA (h): sc-72417, ABHD3 siRNA (m): sc-140771, ABHD3 shRNA Plasmid (h): sc-72417-SH, ABHD3 shRNA Plasmid (m): sc-140771-SH, ABHD3 shRNA (h) Lentiviral Particles: sc-72417-V and ABHD3 shRNA (m) Lentiviral Particles: sc-140771-V.

Molecular Weight of ABHD3: 46 kDa.

## RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (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) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.