## SANTA CRUZ BIOTECHNOLOGY, INC.

# ABHD14A (T-14): sc-161301



BACKGROUND

The  $\alpha/\beta$  hydrolase superfamily is comprised of 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. 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. ABDH6 may play a role in nervous system metabolism and signaling. ABHD14A is possibly involved in granule neuron development.

#### REFERENCES

- 1. Ollis, D.L., Cheah, E., Cygler, M., Dijkstra, B., Frolow, F., Franken, S.M., Harel, M., Remington, S.J., Silman, I. and Schrag, J. 1992. The  $\alpha/\beta$  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.
- Edgar, A.J. and Polak, J.M. 2002. Cloning and tissue distribution of three murine α/β hydrolase fold protein cDNAs. Biochem. Biophys. Res. Commun. 292: 617-625.
- Miyata, K., Nakayama, M., Mizuta, S., Hokimoto, S., Sugamura, K., Oshima, S., Oike, Y., Sugiyama, S., Ogawa, H. and Yamamura, K. 2008. Elevated mature macrophage expression of human ABHD2 gene in vulnerable plaque. Biochem. Biophys. Res. Commun. 365: 207-213.
- 5. Li, F., Fei, X., Xu, J. and Ji, C. 2009. An unannotated  $\alpha/\beta$  hydrolase superfamily member, ABHD6 differentially expressed among cancer cell lines. Mol. Biol. Rep. 36: 691-696.

#### CHROMOSOMAL LOCATION

Genetic locus: ABHD14A (human) mapping to 3p21.2; Abhd14a (mouse) mapping to 9 F1.

#### SOURCE

ABHD14A (T-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ABHD14A of mouse origin.

#### 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-161301 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

#### **STORAGE**

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

## APPLICATIONS

ABHD14A (T-14) is recommended for detection of ABHD14A 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); non cross-reactive with other ABHD family members.

ABHD14A (T-14) is also recommended for detection of ABHD14A in additional species, including equine and canine.

Suitable for use as control antibody for ABHD14A siRNA (h): sc-78447, ABHD14A siRNA (m): sc-140768, ABHD14A shRNA Plasmid (h): sc-78447-SH, ABHD14A shRNA Plasmid (m): sc-140768-SH, ABHD14A shRNA (h) Lentiviral Particles: sc-78447-V and ABHD14A shRNA (m) Lentiviral Particles: sc-140768-V.

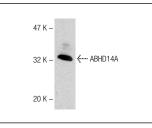
Molecular Weight of ABHD14A: 30 kDa.

Positive Controls: HEL 92.1.7 cell lysate: sc-2270.

#### **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<sup>™</sup> compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker<sup>™</sup> 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 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<sup>™</sup> Mounting Medium: sc-24941.

## DATA



ABHD14A (T-14): sc-161301. Western blot analysis of ABHD14A expression in HEL 92.1.7 whole cell lysate.

## **RESEARCH USE**

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

## PROTOCOLS

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