SANTA CRUZ BIOTECHNOLOGY, INC.

ATPBD4 (G-6): sc-398185



BACKGROUND

ATPBD4 (ATP-binding domain-containing protein 4) is a 267 animo acid protein that is considered a complete proteome. The ATPBD4 gene is conserved in chimpanzee, canine, bovine, mouse, rat, chicken, zebrafish, fruit fly, mosquito, C. elegans, S. pombe, S. cerevisiae, K. lactis, E. gossypii, A. thaliana and *P. falciparum*, and maps to human chromosome 15q14. Encoding more than 700 genes, chromosome 15 is made up of approximately 106 million base pairs and is about 3% of the human genome. Angelman and Prader-Willi syndromes are associated with loss of function or deletion of genes in the 15q11-q13 region. In the case of Angelman syndrome, this loss is due to inactivity of the maternal 15q11-q13 encoded UBE3A gene in the brain by either chromosomal deletion or mutation. In cases of Prader-Willi syndrome, there is a partial or complete deletion of this region from the paternal copy of chromosome 15. Tay-Sachs disease is a lethal disorder associated with mutations of the HEXA gene, which is encoded by chromosome 15. Marfan syndrome is associated with chromosome 15 through the FBN1 gene.

REFERENCES

- 1. Cachón-González, M.B., et al. 2006. Effective gene therapy in an authentic model of Tay-Sachs-related diseases. Proc. Natl. Acad. Sci. USA 103: 10373-10378.
- 2. Zody, M.C., et al. 2006. Analysis of the DNA sequence and duplication history of human chromosome 15. Nature 440: 671-675.
- 3. Diene, G., et al. 2007. The Prader-Willi syndrome. Ann. Endocrinol. 68: 129-137.

CHROMOSOMAL LOCATION

Genetic locus: ATPBD4 (human) mapping to 15g14; Dph6 (mouse) mapping to 2 E4.

SOURCE

ATPBD4 (G-6) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 189-216 within an internal region of ATPBD4 of human origin.

PRODUCT

Each vial contains 200 μ g lgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ATPBD4 (G-6) is available conjugated to agarose (sc-398185 AC), 500 $\mu\text{g}/$ 0.25 ml agarose in 1 ml, for IP; to HRP (sc-398185 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-398185 PE), fluorescein (sc-398185 FITC), Alexa Fluor® 488 (sc-398185 AF488), Alexa Fluor® 546 (sc-398185 AF546), Alexa Fluor® 594 (sc-398185 AF594) or Alexa Fluor® 647 (sc-398185 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-398185 AF680) or Alexa Fluor® 790 (sc-398185 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Blocking peptide available for competition studies, sc-398185 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

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APPLICATIONS

ATPBD4 (G-6) is recommended for detection of ATPBD4 of mouse, rat and human origin by Western Blotting (starting dilution 1:100, 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).

ATPBD4 (G-6) is also recommended for detection of ATPBD4 in additional species, including canine and bovine.

Suitable for use as control antibody for ATPBD4 siRNA (h): sc-90058, ATPBD4 siRNA (m): sc-141373, ATPBD4 shRNA Plasmid (h): sc-90058-SH, ATPBD4 shRNA Plasmid (m): sc-141373-SH, ATPBD4 shRNA (h) Lentiviral Particles: sc-90058-V and ATPBD4 shRNA (m) Lentiviral Particles: sc-141373-V.

Molecular Weight of ATPBD4: 30 kDa.

Positive Controls: ATPBD4 (h): 293T Lysate: sc-117020, K-562 whole cell lysate: sc-2203 or T-47D cell lysate: sc-2293.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-lqGk BP-HRP: sc-516102 or m-lqGk 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. 2) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA





ATPBD4 (G-6): sc-398185. Western blot analysis of ATPBD4 expression in K-562 (A), HeLa (B) and T-47D (C) whole cell lysates.

ATPBD4 (G-6): sc-398185. Western blot analysis of ATPBD4 expression in non-transfected: sc-117752 (A) and human ATPBD4 transfected: sc-117020 (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.