

# ATPBD4 (G-6): sc-398185

## BACKGROUND

ATPBD4 (ATP-binding domain-containing protein 4) is a 267 amino 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 15q14; 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 µg IgG<sub>1</sub> 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 µg/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<sup>®</sup> 488 (sc-398185 AF488), Alexa Fluor<sup>®</sup> 546 (sc-398185 AF546), Alexa Fluor<sup>®</sup> 594 (sc-398185 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-398185 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-398185 AF680) or Alexa Fluor<sup>®</sup> 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.

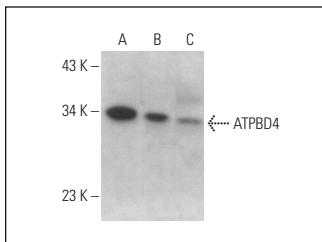
Molecular Weight of ATPBD4: 30 kDa.

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

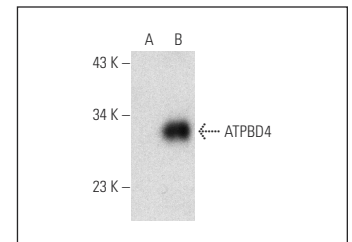
## RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgGκ BP-HRP: sc-516102 or m-IgGκ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker<sup>™</sup> Molecular Weight Standards: sc-2035, UltraCruz<sup>®</sup> 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-IgGκ BP-FITC: sc-516140 or m-IgGκ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz<sup>®</sup> Mounting Medium: sc-24941 or UltraCruz<sup>®</sup> 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.