

ABP1 (G-11): sc-515908

BACKGROUND

Amiloride-binding protein 1, amine oxidase, copper-containing (ABP1), also known as diamine oxidase (DAO), is a member of the copper/topaquinone oxidase family. The human homolog is known as kidney amine oxidase (KAO), DAO or ABP1. Notable compounds degraded by ABP1 include putrescine, histamine, spermine and spermidine, as well as substances involved in allergic and immune responses, cell proliferation, tissue differentiation, tumor formation, and possibly apoptosis. The secreted ABP1 protein can be detected in the extracellular space of placenta and kidney. Placental ABP1 is thought to play a role in the regulation of female reproductive function.

REFERENCES

- Valette, G., et al. 1954. Intracellular distribution of diamine oxidase (histaminase) in the pig kidney. *C.R. Seances Soc. Biol. Fil.* 148: 1762-1764.
- Kapeller-Adler, R., et al. 1963. Purification and identification of hog-kidney histaminase. *Biochim. Biophys. Acta* 67: 542-565.
- Bardsley, W.G., et al. 1972. Oxidation of p-dimethylaminomethylbenzylamine by pig kidney diamine oxidase. A new method for spectrophotometric assay. *Biochem. J.* 127: 875-879.
- Matsumoto, T., et al. 1984. 3-(p-hydroxyphenyl)propionic acid as a new fluorogenic reagent for amine oxidase assays. *Anal. Biochem.* 138: 133-136.
- Silva, I.J., et al. 1996. Superoxide anion radical generation during the oxidation of various amines by diamine oxidase. *Free Radic. Res.* 24: 167-175.
- Gokturk, C., et al. 2004. Semicarbazide-sensitive amine oxidase in transgenic mice with diabetes. *Biochem. Biophys. Res. Commun.* 325: 1013-1020.

CHROMOSOMAL LOCATION

Genetic locus: AOC1 (human) mapping to 7q36.1; Aoc1 (mouse) mapping to 6 B2.3.

SOURCE

ABP1 (G-11) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 267-290 within an internal region of ABP1 of mouse origin.

PRODUCT

Each vial contains 200 µg IgG_{2b} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

ABP1 (G-11) is available conjugated to agarose (sc-515908 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-515908 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-515908 PE), fluorescein (sc-515908 FITC), Alexa Fluor[®] 488 (sc-515908 AF488), Alexa Fluor[®] 546 (sc-515908 AF546), Alexa Fluor[®] 594 (sc-515908 AF594) or Alexa Fluor[®] 647 (sc-515908 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-515908 AF680) or Alexa Fluor[®] 790 (sc-515908 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

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APPLICATIONS

ABP1 (G-11) is recommended for detection of ABP1 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).

Suitable for use as control antibody for ABP1 siRNA (h): sc-62519, Abp1 siRNA (m): sc-62520, ABP1 shRNA Plasmid (h): sc-62519-SH, Abp1 shRNA Plasmid (m): sc-62520-SH, ABP1 shRNA (h) Lentiviral Particles: sc-62519-V and Abp1 shRNA (m) Lentiviral Particles: sc-62520-V.

Molecular Weight of ABP1 monomer: 92 kDa.

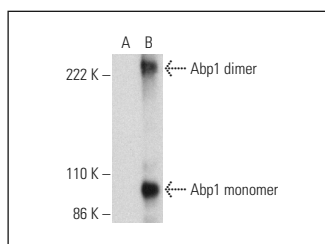
Molecular Weight of ABP1 dimer: 180 kDa.

Positive Controls: Abp1 (m): 293T Lysate: sc-118172.

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[™] 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-IgGκ BP-FITC: sc-516140 or m-IgGκ 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



Abp1 (G-11): sc-515908. Western blot analysis of Abp1 expression in non-transfected: sc-117752 (A) and mouse Abp1 transfected: sc-118172 (B) 293T whole cell lysates.

SELECT PRODUCT CITATIONS

- Karer, M., et al. 2022. Diamine oxidase knockout mice are not hypersensitive to orally or subcutaneously administered histamine. *Inflamm. Res.* 71: 497-511.

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.