SANTA CRUZ BIOTECHNOLOGY, INC.

DABP (H-6): sc-390146

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

DABP (D-boxBP, D site-binding protein, albumin D-element-binding protein, TAXREB302) is a 325 amino acid protein that belongs to the bZIP family (PAR subfamily) and contains one bZIP domain. It functions as a transcriptional activator that recognizes and binds to the promoter sequence 5'-RTTAYGTAAY-3' found in the promoter region of genes such as albumin, CYP2A4 and CYP2A5. It is not essential for circadian rhythm generation, however, it does help modulate important clock output genes. DABP may be a direct target for regulation by the circadian pacemaker component Clock. Mice deficient for bZip PAR gene products (such as DABP, EPAS-1 and TEF) are highly susceptible to generalized spontaneous and audiogenic epilepsies. This is likely because bZip PAR targets the gene that encodes pyridoxal kinase. This kinase converts vitamin B6 derivatives into pyridoxal phosphate (PLP) which is a coenzyme for amino acid and neurotransmitter metabolism.

REFERENCES

1. Szpirer, C., et al. 1992. Chromosomal localization in man and rat of the genes encoding the liver-enriched transcription factors C/EBP, DBP, and HNF1/LFB-1 (CEBP, DBP, and transcription factor 1, TCF1, respectively) and of the hepatocyte growth factor/scatter factor gene (HGF). Genomics 13: 293-300.
2. Khatib, Z.A., et al. 1995. Chromosomal localization and cDNA cloning of the human DBP and TEF genes. Genomics 23: 344-351.
3. Shutler, G., et al. 1996. Genomic structure of the human D-site binding protein (DBP) gene. Genomics 34: 334-339.
4. Brown, S.A. and Schibler, U. 1999. The ins and outs of circadian timekeeping. Curr. Opin. Genet. Dev. 9: 588-594.
5. Gachon, F., et al. 2004. The loss of circadian PAR bZip transcription factors results in epilepsy. Genes Dev. 18: 1397-1412.

CHROMOSOMAL LOCATION

Genetic locus: DBP (human) mapping to 19q13.33.

SOURCE

DABP (H-6) is a mouse monoclonal antibody raised against amino acids 35-74 mapping near the N-terminus of DABP of human origin.

PRODUCT

Each vial contains 200 µg IgG_{2a} kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390146 X, 200 µg/0.1 ml.

DABP (H-6) is available conjugated to agarose (sc-390146 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-390146 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-390146 PE), fluorescein (sc-390146 FITC), Alexa Fluor® 488 (sc-390146 AF488), Alexa Fluor® 546 (sc-390146 AF546), Alexa Fluor® 594 (sc-390146 AF594) or Alexa Fluor® 647 (sc-390146 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-390146 AF680) or Alexa Fluor® 790 (sc-390146 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

DABP (H-6) is recommended for detection of DABP of 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 DABP siRNA (h): sc-97554, DABP shRNA Plasmid (h): sc-97554-SH and DABP shRNA (h) Lentiviral Particles: sc-97554-V.

DABP (H-6) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

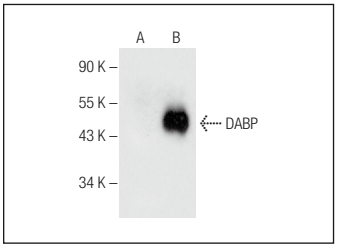
Molecular Weight of DABP: 34 kDa.

Positive Controls: DABP (h): 293 Lysate: sc-112971.

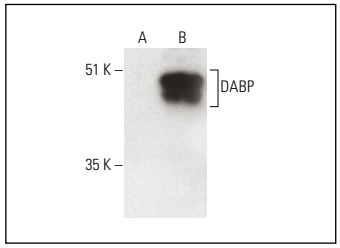
RECOMMENDED SUPPORT REAGENTS

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



DABP (H-6): sc-390146. Western blot analysis of DABP expression in non-transfected: sc-110760 (**A**) and human DABP transfected: sc-112971 (**B**) 293 whole cell lysates.



DABP (H-6) HRP: sc-390146 HRP. Direct western blot analysis of DABP expression in non-transfected: sc-117752 (**A**) and human DABP transfected: sc-112971 (**B**) 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.

PROTOCOLS

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