SANTA CRUZ BIOTECHNOLOGY, INC.

DBP (H-300): sc-32899

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Vitamin D-binding protein (DBP) is a multi-functional serum protein that binds to the plasma membranes of numerous cell types and mediates a variety of cellular functions. The locus of the DBP protein (also known as group-specific component protein or GC) is located at human chromosome 4q13.3. DBP functions in organ-specific transportation of vitamin D and its metabolites to the various target organs of the vitamin D endocrine system. In addition, DBP has immunomodulatory properties and is able to bind to the surface of leukocytes. DBP binds to the plasma membrane through a chondroitin sulfate proteoglycan. DBP serves as a co-chemotactic factor for C5a to enhance the chemotactic activity of C5a. DBP can also bind to globular Actin with high affinity and is involved in the clearance of Actin from the blood. DBP plays an important role in osteoclast differentiation. The diverse cellular functions of DBP require its cell surface binding ability to mediate different biological processes.

CHROMOSOMAL LOCATION

Genetic locus: GC (human) mapping to 4q13.3; Gc (mouse) mapping to 5 E1.

SOURCE

DBP (H-300) is a rabbit polyclonal antibody raised against amino acids 175-474 mapping at the C-terminus of DBP of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

DBP (H-300) is recommended for detection of DBP 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), immunohistochemistry (including paraffin-embedded sections) (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 DBP siRNA (h): sc-41375, DBP siRNA (m): sc-41376, DBP shRNA Plasmid (h): sc-41375-SH, DBP shRNA Plasmid (m): sc-41376-SH, DBP shRNA (h) Lentiviral Particles: sc-41375-V and DBP shRNA (m) Lentiviral Particles: sc-41376-V.

Molecular Weight of DBP: 58 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, human plasma extract: sc-364374 or human heart extract: sc-363763.

STORAGE

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

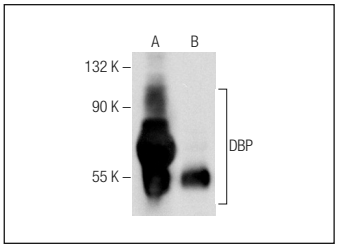
PROTOCOLS

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

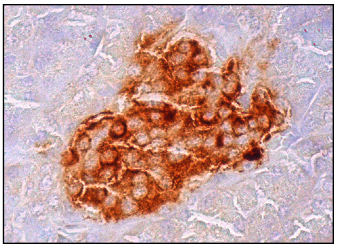
RESEARCH USE

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

DATA



DBP (H-300): sc-32899. Western blot analysis of DBP in human plasma (**A**) and human heart tissue extract (**B**).



DBP (H-300): sc-32899. Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of Islets of Langerhans.

SELECT PRODUCT CITATIONS

1. Chaerkady, R., et al. 2008. A quantitative proteomic approach for identification of potential biomarkers in hepatocellular carcinoma. J. Proteome Res. 7: 4289-4298.
2. Jirikowski, G.F., et al. 2009. Distribution of vitamin D binding protein expressing neurons in the rat hypothalamus. Histochem. Cell Biol. 131: 365-370.
3. Chen, C.L., et al. 2013. Identification of potential bladder cancer markers in urine by abundant-protein depletion coupled with quantitative proteomics. J. Proteomics 85: 28-43.
4. Moon, M., et al. 2013. Vitamin D-binding protein interacts with Aβ and suppresses Aβ-mediated pathology. Cell Death Differ. 20: 630-638.
5. Yang, M., et al. 2013. Vitamin D-binding protein in cerebrospinal fluid is associated with multiple sclerosis progression. Mol. Neurobiol. 47: 946-956.