

DBP (N-14): sc-18704

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.

REFERENCES

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- Papiha, S.S., et al. 1999. Vitamin D-binding protein gene in male osteoporosis: association of plasma DBP and bone mineral density with (TAAA) (n)-Alu polymorphism in DBP. *Calcif. Tissue Int.* 65: 262-266.
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- Swamy, N., et al. 2001. Baculovirus-expressed vitamin D-binding protein-macrophage activating factor (DBP-maf) activates osteoclasts and binding of 25-hydroxyvitamin D3 does not influence this activity. *J. Cell. Biochem.* 81: 535-546.

CHROMOSOMAL LOCATION

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

SOURCE

DBP (N-14) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the N-terminus of DBP of human origin.

STORAGE

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

PRODUCT

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

Blocking peptide available for competition studies, sc-18704 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

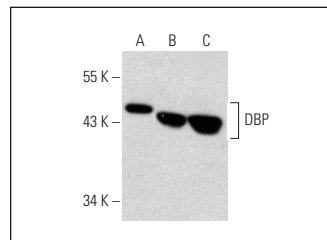
DBP (N-14) is recommended for detection of DBP of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) 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.

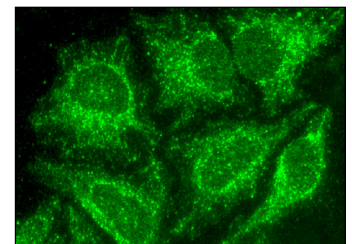
Molecular Weight of DBP: 58 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207 or NCI-H929 whole cell lysate: sc-364786.

DATA



DBP (N-14): sc-18704. Western blot analysis of DBP expression in 293T (A), BJAB (B) and NCI-H929 (C) whole cell lysates.



DBP (N-14): sc-18704. Immunofluorescence staining of formalin-fixed HeLa cells showing cytoplasmic localization.

RESEARCH USE

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

PROTOCOLS

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



Try **DBP (A-5): sc-365441** or **DBP (2B12): sc-69771**, our highly recommended monoclonal alternatives to DBP (N-14).