

DBP (2B12): sc-69771

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.
- Hirai, M., et al. 2000. Variations in vitamin D-binding protein (group-specific component protein) are associated with fasting plasma Insulin levels in Japanese with normal glucose tolerance. *J. Clin. Endocrinol. Metab.* 85: 1951-1953.
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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.

SOURCE

DBP (2B12) is a mouse monoclonal antibody raised against purified DBP of human origin.

PRODUCT

Each vial contains IgG₁ in 100 μ l of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

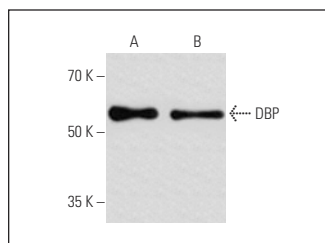
DBP (2B12) is recommended for detection of DBP of human origin by Western Blotting (starting dilution to be determined by researcher, dilution range 1:100-1:5000), immunoprecipitation [1-2 μ l per 100-500 μ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution to be determined by researcher, dilution range 1:50-1:2500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution to be determined by researcher, dilution range 1:50-1:2500).

Suitable for use as control antibody for DBP siRNA (h): sc-41375, DBP shRNA Plasmid (h): sc-41375-SH and DBP shRNA (h) Lentiviral Particles: sc-41375-V.

Molecular Weight of DBP: 58 kDa.

Positive Controls: BJAB whole cell lysate: sc-2207, NCI-H929 whole cell lysates or human plasma extract: sc-364374.

DATA



DBP (2B12): sc-69771. Western blot analysis of DBP purified from human plasma (A) and in human plasma (B).

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.