10320 Camino Santa Fe, Suite G
San Diego, CA 92121
Tel: 858.875.1900 Fax: 858.875.1999

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7)

Catalog # ABO16566

Specification

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Product Information

Application	**WB, IHC, FC**
Primary Accession	Q16643
Host	**Mouse**
Isotype	**Mouse IgG2a**
Reactivity	**Rat, Human, Mouse, Monkey**
Clonality	**Monoclonal**
Format	**Lyophilized**

Description
Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) . Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat, Monkey.

Reconstitution
Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Additional Information

Gene ID 1627

Other Names
Drebrin, Developmentally-regulated brain protein, DBN1, D0S117E

Calculated MW
120 kDa KDa

Application Details
Western blot, 0.25-0.5 µg/ml, Human, Mouse, Rat, Monkey
Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human, Rat
 Flow Cytometry, 1-3 µg/1x10^6 cells, Human

Contents
Each vial contains 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.

Immunogen
E.coli-derived human Drebrin/DBN1 recombinant protein (Position: H9-D649).

Purification
Immunogen affinity purified.

Storage	**At -20°C for one year from date of receipt. After reconstitution, at 4°C for one month. It can also be aliquotted and stored frozen at -20°C for six months. Avoid repeated freezing and thawing.**

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Protein Information

Name DBN1

Synonyms D0S117E

Function
Actin cytoskeleton-organizing protein that plays a role in the formation of cell projections (PubMed:20215400). Required for actin polymerization at immunological synapses (IS) and for the recruitment of the chemokine receptor CXCR4 to IS (PubMed:20215400). Plays a role in dendritic spine morphogenesis and organization, including the localization of the dopamine receptor DRD1 to the dendritic spines (By similarity). Involved in memory-related synaptic plasticity in the hippocampus (By similarity).

Cellular Location
Cytoplasm. Cell projection, dendrite. Cytoplasm, cell cortex. Cell junction. Cell projection, growth cone {ECO:0000250|UniProtKB:Q9QXS6}. Note=In the absence of antigen, evenly distributed throughout subcortical regions of the T-cell membrane and cytoplasm (PubMed:20215400). In the presence of antigen, distributes to the immunological synapse forming at the T-cell-APC contact area, where it localizes at the peripheral and distal supramolecular activation clusters (SMAC) (PubMed:20215400). Colocalized with RUFY3 and F-actin at the transitional domain of the axonal growth cone (By similarity) {ECO:0000250|UniProtKB:Q9QXS6, ECO:0000269|PubMed:20215400}

Tissue Location
Expressed in the brain, with expression in the molecular layer of the dentate gyrus, stratum pyramidale, and stratum radiatum of the hippocampus (at protein level) (PubMed:8838578). Also expressed in the terminal varicosities distributed along dendritic trees of pyramidal cells in CA4 and CA3 of the hippocampus (at protein level) (PubMed:8838578). Expressed in pyramidal cells in CA2, CA1 and the subiculum of the hippocampus (at protein level) (PubMed:8838578) Expressed in peripheral blood lymphocytes, including T-cells (at protein level) (PubMed:20215400). Expressed in the brain (PubMed:8216329, Ref.2). Expressed in the heart, placenta, lung, skeletal muscle, kidney, pancreas, skin fibroblasts, gingival fibroblasts and bone-derived cells (Ref.2) {ECO:0000269|PubMed:20215400, ECO:0000269|PubMed:8216329, ECO:0000269|PubMed:8838578, ECO:0000269|Ref.2}

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Protocols

Provided below are standard protocols that you may find useful for product applications.

- Western Blot
- Blocking Peptides
- Dot Blot
- Immunohistochemistry
- Immunofluorescence
- Immunoprecipitation
- Flow Cytomety
- Cell Culture

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Images

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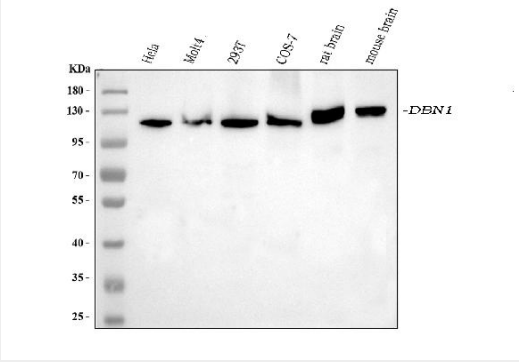

Figure 1. Western blot analysis of DBN1 using anti-DBN1 antibody (M05530-4).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human Hela whole cell lysates,
Lane 2: human Molt4 whole cell lysates,
Lane 3: human 293T whole cell lysates,
Lane 4: monkey COS-7 whole cell lysates,
Lane 5: rat brain tissue lysates,
Lane 6: mouse brain tissue lysates.
After electrophoresis, proteins were transferred to a nitrocellulose membrane at 150 mA for 50-90 minutes. Blocked the membrane with 5% non-fat milk/TBS for 1.5 hour at RT. The membrane was incubated with mouse anti-DBN1 antigen affinity purified monoclonal antibody (Catalog # M05530-4) at 0.5 µg/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-mouse IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1001) with Tanon 5200 system. A specific band was detected for DBN1 at approximately 120 kDa. The expected band size for DBN1 is at 71 kDa.

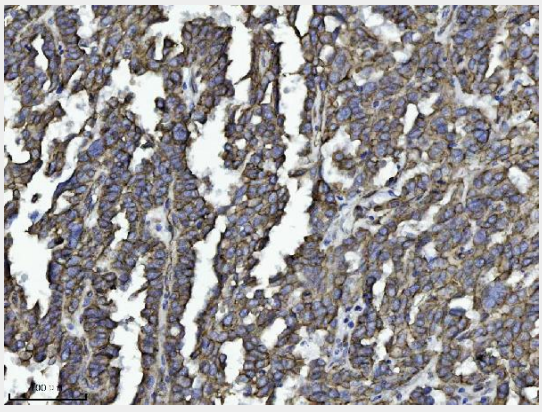

Figure 2. IHC analysis of DBN1 using anti-DBN1 antibody (M05530-4).
DBN1 was detected in a paraffin-embedded section of human ovarian serous carcinoma tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-DBN1 Antibody (M05530-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

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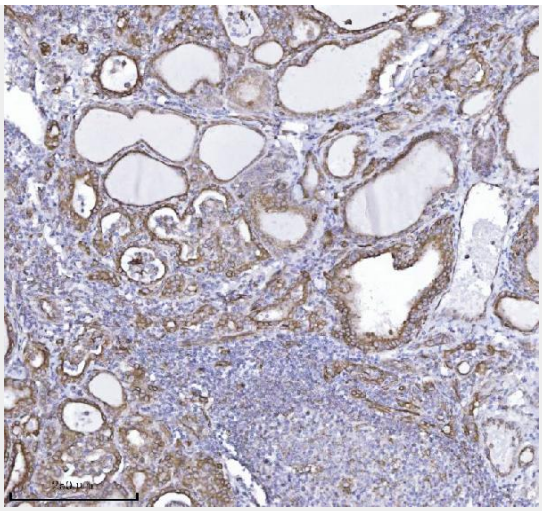

Figure 3. IHC analysis of DBN1 using anti-DBN1 antibody (M05530-4).
DBN1 was detected in a paraffin-embedded section of human thyroid cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-DBN1 Antibody (M05530-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

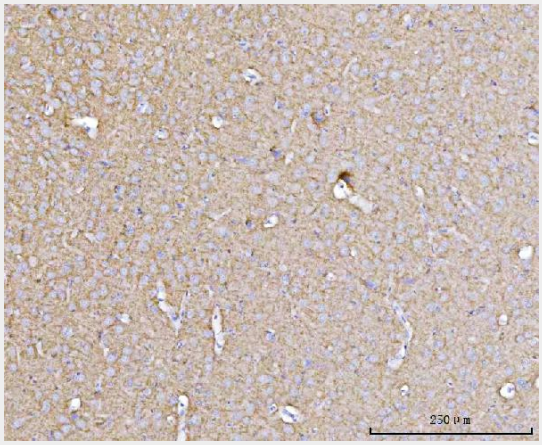

Figure 4. IHC analysis of DBN1 using anti-DBN1 antibody (M05530-4).
DBN1 was detected in a paraffin-embedded section of rat brain tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 µg/ml mouse anti-DBN1 Antibody (M05530-4) overnight at 4°C. Peroxidase Conjugated Goat Anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Mouse IgG Super Vision Assay Kit (Catalog # SV0001) with DAB as the chromogen.

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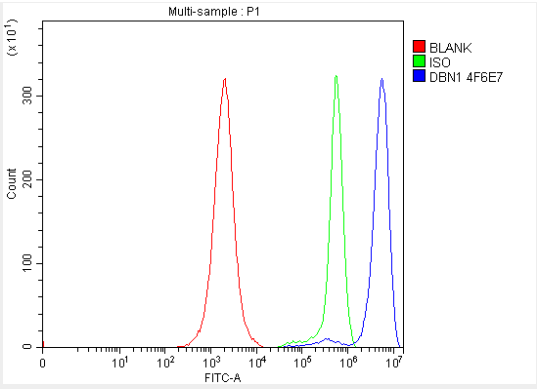

Figure 5. Flow Cytometry analysis of JK cells using anti-DBN1 antibody (M05530-4).
Overlay histogram showing JK cells stained with M05530-4 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-DBN1 Antibody (M05530-4, 1 µg/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 µg/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 µg/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-Drebrin/DBN1 Antibody Picoband™ (monoclonal, 4F6E7) - Background

Drebrin is a protein that in humans is encoded by the DBN1 gene. The protein encoded by this gene is a cytoplasmic actin-binding protein thought to play a role in the process of neuronal growth. It is a member of the drebrin family of proteins that are developmentally regulated in the brain. A decrease in the amount of this protein in the brain has been implicated as a possible contributing factor in the pathogenesis of memory disturbance in Alzheimer's disease. At least two alternative splice variants encoding different protein isoforms have been described for this gene.