

Anti-DCK Antibody Picoband™ (monoclonal, 3G10)
Catalog # ABO14895

Specification

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Product Information

Application	WB, IHC, IF, ICC, FC
Primary Accession	P27707
Host	Mouse
Isotype	Mouse IgG2b
Reactivity	Human
Clonality	Monoclonal
Format	Lyophilized

Description

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) . Tested in Flow Cytometry, IF, IHC, ICC, WB applications. This antibody reacts with Human.

Reconstitution

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

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Additional Information

Gene ID 1633

Other Names

Deoxycytidine kinase, dCK, 2.7.1.74, Deoxyadenosine kinase, 2.7.1.76, Deoxyguanosine kinase, 2.7.1.113, DCK

Calculated MW

30 kDa KDa

Application Details

Western blot, 0.1-0.5 µg/ml, Human
 Immunohistochemistry (Paraffin-embedded Section), 0.5-1 µg/ml, Human, By Heat
 Immunocytochemistry/Immunofluorescence, 2 µg/ml, Human
 Flow Cytometry, 1-3 µg/1x10⁶ cells, Human

Subcellular Localization

Nucleus

Contents

Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na₂HPO₄, 0.05mg Na₃.

Immunogen

E. coli-derived human DCK recombinant protein (Position: E17-L260).

Cross Reactivity

No cross-reactivity with other proteins.

Storage

Store 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 freeze-thaw cycles.

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Protein Information

Name DCK

Function

Phosphorylates the deoxyribonucleosides deoxycytidine, deoxyguanosine and deoxyadenosine (PubMed:12808445, PubMed:18377927, PubMed:19159229, PubMed:1996353, PubMed:20614893, PubMed:20637175). Has broad substrate specificity, and does not display selectivity based on the chirality of the substrate. It is also an essential enzyme for the phosphorylation of numerous nucleoside analogs widely employed as antiviral and chemotherapeutic agents (PubMed:12808445).

Cellular Location

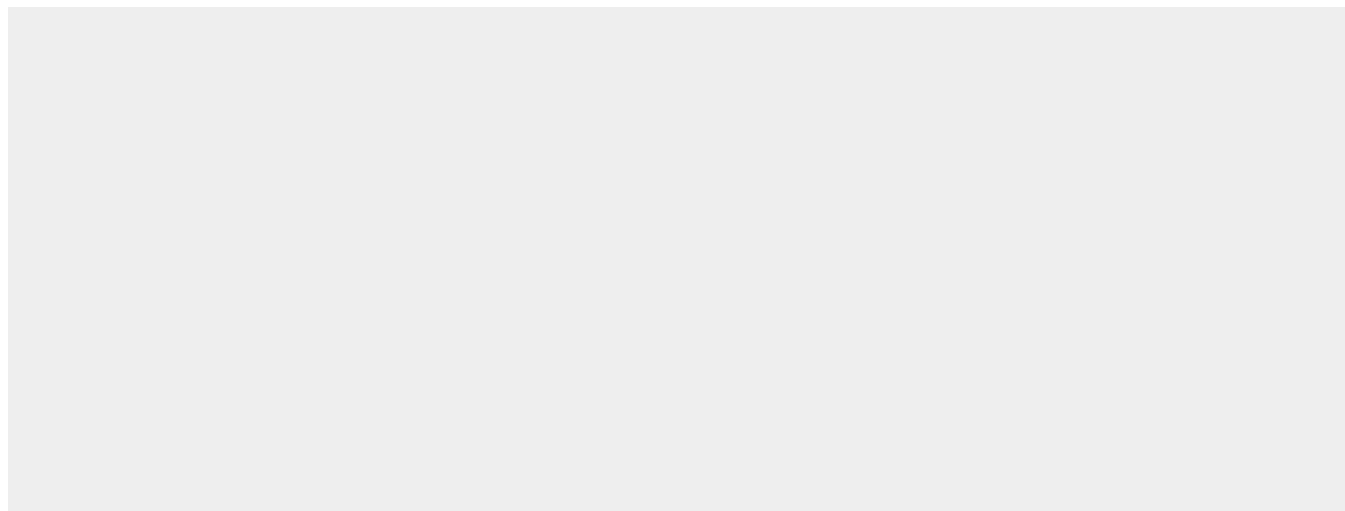
Nucleus.

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Protocols

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

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Images



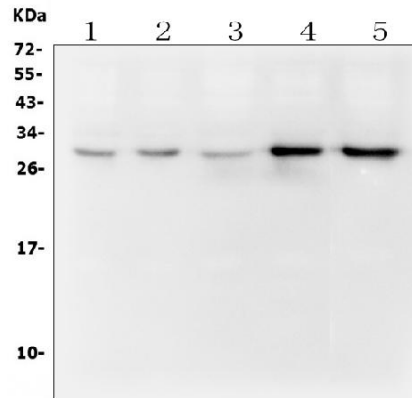


Figure 1. Western blot analysis of DCK using anti ZO-1 antibody (M01655).

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 50ug of sample under reducing conditions.

- Lane 1: human HEK293 tissue lysates,
- Lane 2: human Hela whole cell lysates,
- Lane 3: human HepG2 whole cell lysates,
- Lane 4: human Jurkat whole cell lysates,
- Lane 5: human Raji whole cell lysates,

After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-DCK antigen affinity purified polyclonal antibody (Catalog # M01655) 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 DCK at approximately 30KD. The expected band size for DCK is at 30KD.

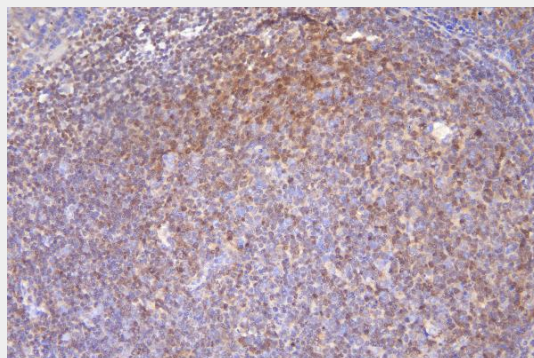


Figure 2. IHC analysis of DCK using anti-DCK antibody (M01655).

DCK was detected in paraffin-embedded section of human tonsil cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 µg/ml mouse anti-DCK Antibody (M01655) overnight at 4°C. Biotinylated goat anti-mouse IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Streptavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

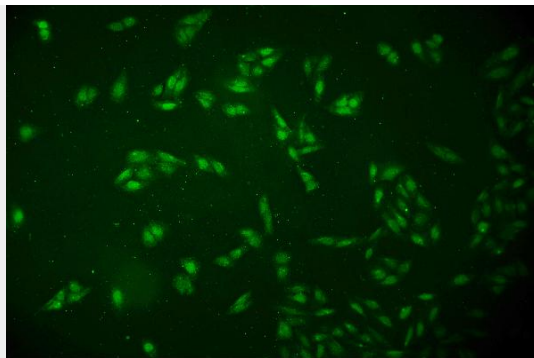


Figure 3. IF analysis of DCK using anti-DCK antibody (M01655).

DCK was detected in immunocytochemical section of U2OS cell. Enzyme antigen retrieval was performed using IHC enzyme antigen retrieval reagent (AR0022) for 15 mins. The cells were blocked with 10% goat serum. And then incubated with 2 $\mu\text{g}/\text{mL}$ mouse anti-DCK Antibody (M01655) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Mouse IgG (BA1126) was used as secondary antibody at 1:100 dilution and incubated for 30 minutes at 37°C. The section was counterstained with DAPI. Visualize using a fluorescence microscope and filter sets appropriate for the label used.

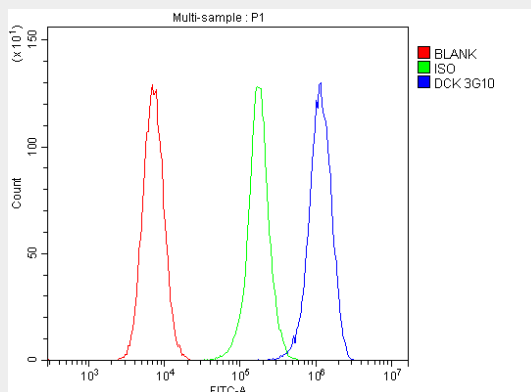


Figure 4. Flow Cytometry analysis of 293T cells using anti-DCK antibody (M01655).

Overlay histogram showing 293T cells stained with M01655 (Blue line). The cells were blocked with 10% normal goat serum. And then incubated with mouse anti-DCK Antibody (M01655, 1 $\mu\text{g}/1 \times 10^6$ cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10 $\mu\text{g}/1 \times 10^6$ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1 $\mu\text{g}/1 \times 10^6$) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

Anti-DCK Antibody Picoband™ (monoclonal, 3G10) - Background

Deoxycytidine kinase (dCK) is an enzyme which is encoded by the DCK gene in humans. Deoxycytidine kinase (DCK) is required for the phosphorylation of several deoxyribonucleosides and their nucleoside analogs. Deficiency of DCK is associated with resistance to antiviral and anticancer chemotherapeutic agents. Conversely, increased deoxycytidine kinase activity is associated with increased activation of these compounds to cytotoxic nucleoside triphosphate derivatives. DCK is clinically important because of its relationship to drug resistance and sensitivity.