

## Anti-Mitochondrial dicarboxylate carrier/SLC25A10 Antibody Picoband™

Catalog Number: A10727-3

### About SLC25A10

The mitochondrial dicarboxylate carrier (DIC) is an integral membrane protein encoded by the SLC25A10 gene in humans that catalyzes the transport of dicarboxylates such as malonate, malate, and succinate across the inner mitochondrial membrane in exchange for phosphate, sulfate, and thiosulfate by a simultaneous antiport mechanism, thus supplying substrates for the Krebs cycle, gluconeogenesis, urea synthesis, fatty acid synthesis, and sulfur metabolism. This gene encodes a member of a family of proteins that translocate small metabolites across the mitochondrial membrane. The encoded protein exchanges dicarboxylates, such as malate and succinate, for phosphate, sulfate, and other small molecules, thereby providing substrates for metabolic processes including the Krebs cycle and fatty acid synthesis. Alternatively spliced transcript variants encoding multiple isoforms have been observed for this gene.

### Overview

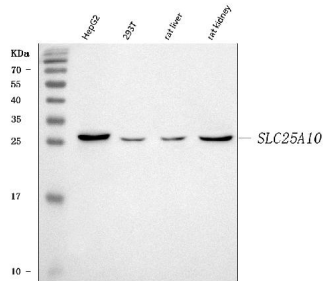
Product Name	Anti-Mitochondrial dicarboxylate carrier/SLC25A10 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Mitochondrial dicarboxylate carrier/SLC25A10 Antibody Picoband™ catalog # A10727-3. Tested in ELISA, IF, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IF, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na <sub>2</sub> HPO <sub>4</sub> .
Storage Instructions	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.
Host	Rabbit
Uniprot ID	Q9UBX3

### Technical Details

Immunogen	E.coli-derived human Mitochondrial dicarboxylate carrier/SLC25A10 recombinant protein (Position: Q37-Q276).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Rabbit IgG
Form	Lyophilized

Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 µg/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	<p>Dilute the sample so that the expected range of concentrations fall within the detection range of this kit.</p> <p>If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples.</p> <p>Some PubMed article(s) citing the expression level of this target are as follows:</p> <p>Boster Bio's internal QC testing used:</p> <p>Western blot, 0.25-0.5 µg/ml, Human, Rat</p> <p>Immunohistochemistry(Paraffin-embedded Section), 2-5 µg/ml, Human, Mouse, Rat</p> <p>Immunofluorescence, 5 µg/ml, Human</p> <p>Direct ELISA, 0.1-0.5 µg/ml, Human</p>

## Anti-Mitochondrial dicarboxylate carrier/SLC25A10 Antibody Picoband™ (A10727-3) Images



**Figure 1.** Western blot analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). 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.

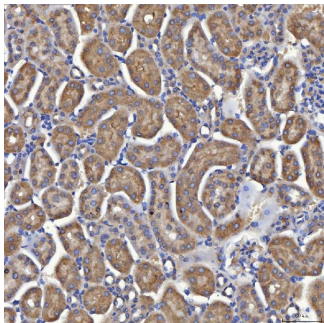
Lane 1: human HepG2 whole cell lysates,

Lane 2: human 293T whole cell lysates,

Lane 3: rat liver tissue lysates,

Lane 4: rat kidney 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 rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antigen affinity purified polyclonal antibody (Catalog # A10727-3) at 0.5 ug/mL overnight at 4°C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit (Catalog # EK1002) with Tanon 5200 system. A specific band was detected for Mitochondrial Dicarboxylate Carrier/SLC25A10 at approximately 29-31 kDa. The expected band size for Mitochondrial Dicarboxylate Carrier/SLC25A10 is at 31 kDa.

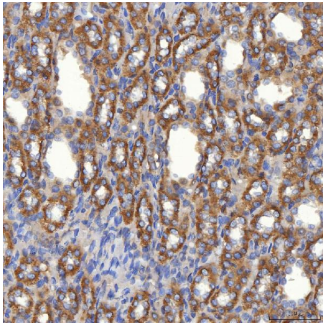


**Figure 2.** IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3).

Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of mouse kidney 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

**Figure 3.** IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3).

Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of rat kidney 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

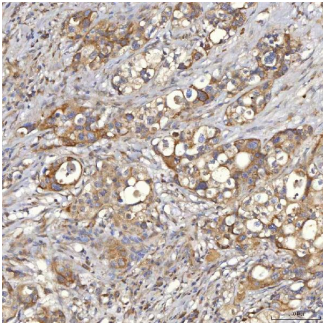


Figure 4. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human appendix adenocarcinoma tissue. Heat mediated antigen retrieval 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

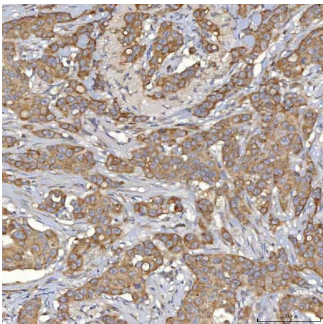


Figure 5. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human breast cancer tissue. Heat mediated antigen retrieval was 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

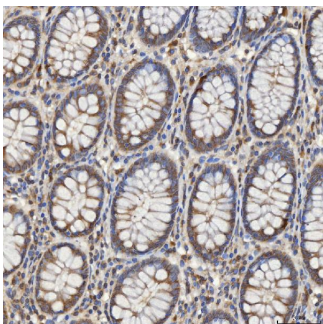


Figure 6. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human colon adenocarcinoma tissue. Heat mediated antigen retrieval 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary



antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

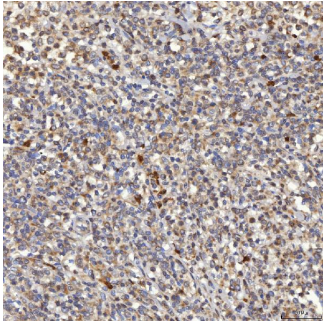


Figure 7. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human diffuse large B cell lymphoma tissue. Heat mediated antigen 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

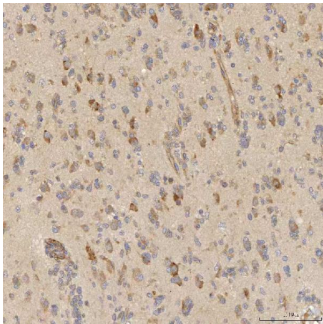


Figure 8. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human glioblastoma tissue. Heat-mediated antigen retrieval was 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

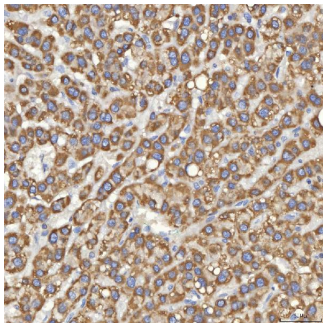
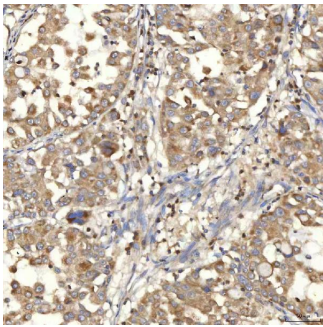


Figure 9. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

Figure 10. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate



Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human lung adenocarcinoma 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

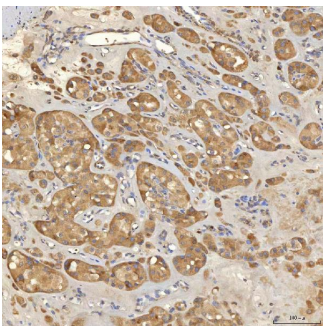


Figure 11. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human right renal oncocytoma tissue. Heat mediated antigen retrieval 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

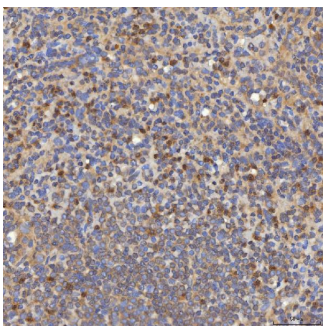


Figure 12. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human spleen tissue. Heat mediated antigen retrieval was performed 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 ug/ml rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

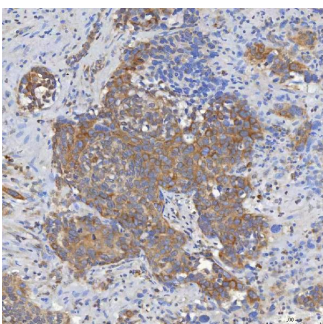


Figure 13. IHC analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human urothelial carcinoma tissue. Heat mediated antigen retrieval 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 ug/ml

rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Peroxidase Conjugated Goat Anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using HRP Conjugated Rabbit IgG Super Vision Assay Kit (Catalog # SV0002) with DAB as the chromogen.

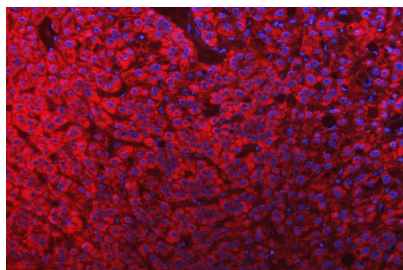


Figure 14. IF analysis of Mitochondrial Dicarboxylate Carrier/SLC25A10 using anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 antibody (A10727-3). Mitochondrial Dicarboxylate Carrier/SLC25A10 was detected in a paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was 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 5 ug/mL rabbit anti-Mitochondrial Dicarboxylate Carrier/SLC25A10 Antibody (A10727-3) overnight at 4°C. Cy3 Conjugated Goat Anti-Rabbit IgG (BA1032) was used as secondary antibody at 1:500 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.

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