BOSTER BIOLOGICAL TECHNOLOGY
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Anti-DOPA decarboxylase/DDC Antibody Picoband®

Catalog Number: A01374-2

About DDC

The encoded protein catalyzes the decarboxylation of L-3,4-dihydroxyphenylalanine (DOPA) to dopamine, L-5-hydroxytryptophan to serotonin and L-tryptophan to tryptamine. Defects in this gene are the cause of aromatic L-amino-acid decarboxylase deficiency (AADCD). AADCD deficiency is an inborn error in neurotransmitter metabolism that leads to combined serotonin and catecholamine deficiency. Multiple alternatively spliced transcript variants encoding different isoforms have been identified for this gene.

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Overview

Product Name	Anti-DOPA decarboxylase/DDC Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-DOPA decarboxylase/DDC Antibody Picoband® catalog # A01374-2. Tested in WB, IHC, IP, Flow Cytometry applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, high affinity, and strong signals with minimal background in Western blot applications. Only our best-performing antibodies are designated as Picoband, ensuring unmatched performance.
Application	Flow Cytometry, IP, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
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	P20711

Technical Details

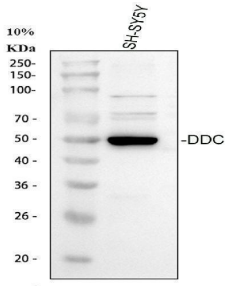
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human DOPA decarboxylase/DDC, which shares 76% amino acid (aa) sequence identity with both mouse and rat DOPA decarboxylase/DDC.

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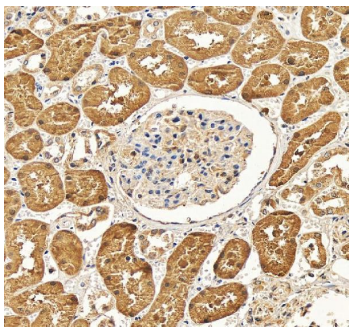
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.25-0.5 ug/ml, Human, Mouse, Rat Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human Immunoprecipitation, 0.5-2 ug/ml, Human Flow Cytometry (Fixed), 1-3 ug/1x10^6 cells, Human Note: For flow cytometry (FCM), suitable for fixed cells only. Not suitable for FACS or surface flow cytometry using live cells.

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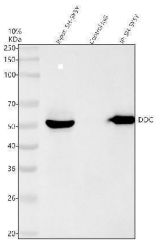
Anti-DOPA decarboxylase/DDC Antibody Picoband® (A01374-2) Images



Western blot analysis of DOPA decarboxylase/DDC using anti-DOPA decarboxylase/DDC antibody (A01374-2). Electrophoresis was performed on a 10% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human SHSY-5Y whole cell lysates, Lane 2: human Caco-2 whole cell lysates, Lane 3: human HepG2 whole cell lysates, Lane 4: rat NRK whole cell lysates, Lane 5: rat PC-12 whole cell lysates, Lane 6: mouse 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-DOPA decarboxylase/DDC antigen affinity purified polyclonal antibody (A01374-2) 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 ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for DOPA decarboxylase/DDC at approximately 50 kDa. The expected band size for DOPA decarboxylase/DDC is at 54 kDa.



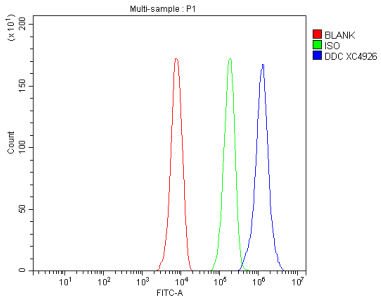
IHC analysis of DOPA decarboxylase/DDC using anti-DOPA decarboxylase/DDC antibody (A01374-2). DOPA decarboxylase/DDC was detected in a paraffin-embedded section of human kidney tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-DOPA decarboxylase/DDC Antibody (A01374-2) 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.



Immunoprecipitating (IP) DOPA decarboxylase/DDC in SH-SY5Y whole cell lysate. Western blot analysis of DOPA decarboxylase/DDC using anti-DOPA decarboxylase/DDC antibody (A01374-2); Lane 1: SH-SY5Y whole cell lysates (30ug); Lane 2: Rabbit control IgG instead of anti-DOPA decarboxylase/DDC antibody in SH-SY5Y whole cell lysate; Lane 3: anti-DOPA decarboxylase/DDC antibody (2ug) + SH-SY5Y whole cell lysate (500ug). After electrophoresis, proteins were transferred to a membrane. Then the membrane was incubated with rabbit anti-DOPA decarboxylase/DDC antigen affinity purified polyclonal antibody (A01374-2) at a dilution of 0.5 ug/mL and probed with a goat anti-rabbit IgG-HRP secondary antibody (Catalog # BA1054). The signal is developed using ECL Plus Western Blotting Substrate (Catalog # AR1196-200). A specific band

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was detected for DOPA decarboxylase/DDC at approximately 50 kDa. The expected band size for DOPA decarboxylase/DDC is at 54 kDa.



Flow Cytometry analysis of HepG2 cells using anti-DOPA decarboxylase/DDC antibody (A01374-2). Overlay histogram showing HepG2 cells stained with A01374-2 (Blue line). To facilitate intracellular staining, cells were fixed with 4% paraformaldehyde and permeabilized with permeabilization buffer. The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-DOPA decarboxylase/DDC Antibody (A01374-2, 1 ug/1x106 cells) for 30 min at 20°C. DyLight?488 conjugated goat anti-rabbit IgG (BA1127, 5-10 ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1 ug/1x106) used under the same conditions. Unlabelled sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

Anti-DOPA decarboxylase/DDC Antibody

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