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Anti-Liver Carboxylesterase 1/CES1 Antibody Picoband® (monoclonal, 3F10)

Catalog Number: M01741-1

About CES1

Liver carboxylesterase 1 also known as carboxylesterase 1 (CES1, hCE-1 or CES1A1) is an enzyme that in humans is encoded by the CES1 gene. This gene encodes a member of the carboxylesterase large family. The family members are responsible for the hydrolysis or transesterification of various xenobiotics, such as cocaine and heroin, and endogenous substrates with ester, thioester, or amide bonds. They may participate in fatty acyl and cholesterol ester metabolism, and may play a role in the blood-brain barrier system. This enzyme is the major liver enzyme and functions in liver drug clearance. Mutations of this gene cause carboxylesterase 1 deficiency. Three transcript variants encoding three different isoforms have been found for this gene.

Overview

Product Name	Anti-Liver Carboxylesterase 1/CES1 Antibody Picoband® (monoclonal, 3F10)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Liver Carboxylesterase 1/CES1 Antibody Picoband® (monoclonal, 3F10) catalog # M01741-1. Tested in Flow Cytometry, IF, IHC, ICC, WB 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, IF, IHC, ICC, WB
Clonality	Monoclonal 3F10
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl and 0.2mg Na2HPO4.
Storage Instructions	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.
Host	Mouse
Uniprot ID	P23141

Technical Details

Immunogen	E. coli-derived human Liver Carboxylesterase 1/CES1 recombinant protein (Position: E99-A206).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti-Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P) and ICC.
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b

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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, 0.1-0.25ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human, Mouse, Rat Immunocytochemistry/Immunofluorescence, 5ug/ml, Human Flow Cytometry (Fixed), 1-3ug/1x10^6 cells, Human

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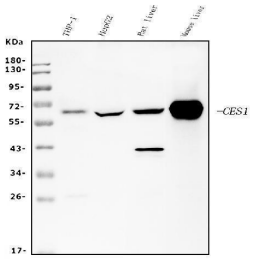
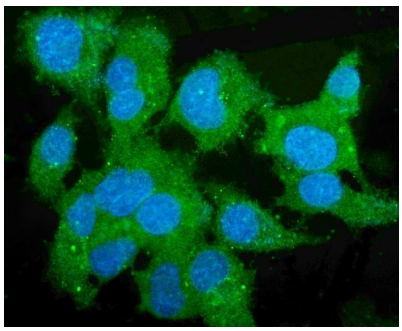
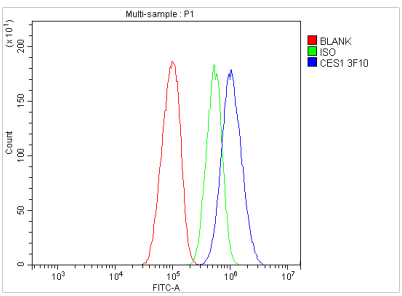
Anti-Liver Carboxylesterase 1/CES1 Antibody Picoband® (monoclonal, 3F10) (M01741-1) Images



Western blot analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). 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 THP-1 whole cell lysates, Lane 2: human HEPG2 whole cell lysates, Lane 3: rat liver tissue lysates, Lane 4: mouse liver tissue 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-Liver Carboxylesterase 1/CES1 antigen affinity purified monoclonal antibody (Catalog # M01741-1) at 0.25 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-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 Liver Carboxylesterase 1/CES1 at approximately 63KD. The expected band size for Liver Carboxylesterase 1/CES1 is at 63KD.



IF analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in immunocytochemical section of HEPG2 cells. 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 5ug/mL mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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.



Flow Cytometry analysis of HEPG2 cells using anti- Liver Carboxylesterase 1/CES1 antibody (M01741-1). Overlay histogram showing HEPG2 cells stained with M01741-1 (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 mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1, 1ug/1x106 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-mouse IgG (BA1126, 5-10ug/1x106 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was mouse IgG (1ug/1x106) used under the same conditions. Unlabelled

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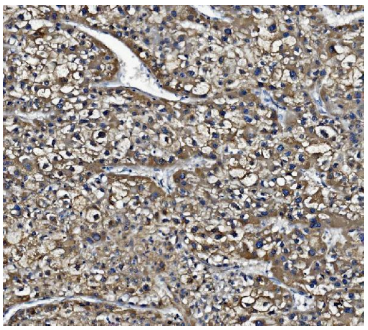
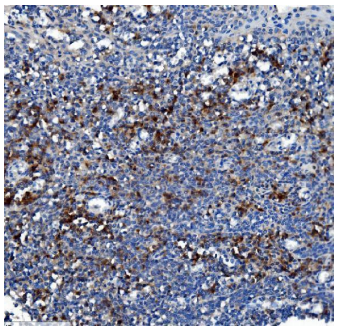
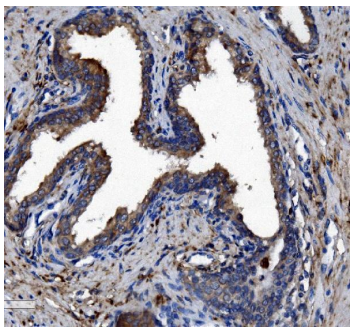
sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.



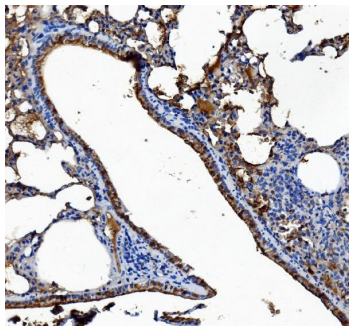
IHC analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2ug/ml mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in paraffin-embedded section of human tonsil 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 2ug/ml mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in paraffin-embedded section of human prostate 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 2ug/ml mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in paraffin-embedded section of mouse lung 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 2ug/ml mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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

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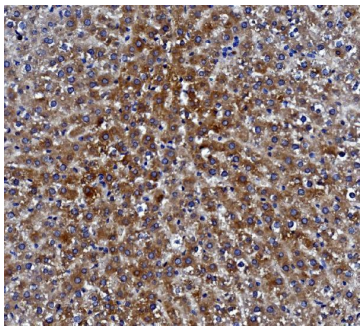
using Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.



IHC analysis of Liver Carboxylesterase 1/CES1 using anti-Liver Carboxylesterase 1/CES1 antibody (M01741-1). Liver Carboxylesterase 1/CES1 was detected in paraffin-embedded section of rat liver 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 2ug/ml mouse anti-Liver Carboxylesterase 1/CES1 Antibody (M01741-1) 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 Strepavidin-Biotin-Complex (SABC) (Catalog # SA1021) with DAB as the chromogen.

Anti-Liver Carboxylesterase 1/CES1 Antibody (monoclonal, 3F10)

For Research Use Only. Not for use in diagnostic procedures.