BOSTER BIOLOGICAL TECHNOLOGY
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Anti-AKR1D1 Antibody Picoband® (monoclonal, 6I4)

Catalog Number: M05278

About AKR1D1

Human delta (4)-3-oxosteroid 5-beta-reductase (steroid 5-beta-reductase) catalyzes 5-beta-reduction of bile acid intermediates and steroid hormones carrying a delta (4)-3-one structure. This gene is mapped to 7q33. The enzyme encoded by this gene is responsible for the catalysis of the 5-beta-reduction of bile acid intermediates and steroid hormones carrying a delta (4)-3-one structure. Deficiency of this enzyme may contribute to hepatic dysfunction. Three transcript variants encoding different isoforms have been found for this gene. Other variants may be present, but their full-length natures have not been determined yet.

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Overview

Product Name	Anti-AKR1D1 Antibody Picoband® (monoclonal, 6I4)
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-AKR1D1 Antibody Picoband® (monoclonal, 6I4) catalog # M05278. Tested in Flow Cytometry, IHC, 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, IHC, WB
Clonality	Monoclonal 6I4
Formulation	Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg NaN3.
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	P51857

Technical Details

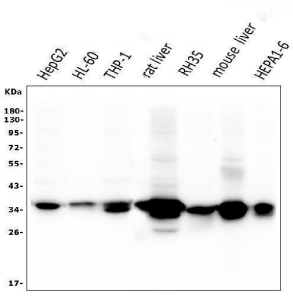
Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human AKR1D1, which shares 90.9% and 93.9% amino acid (aa) sequence identity with mouse and rat AKR1D1, respectively.

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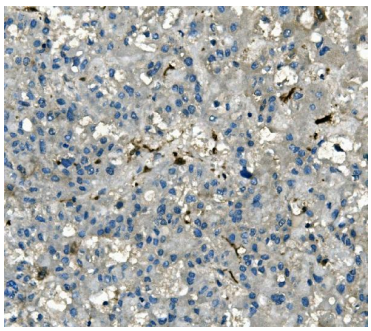
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Mouse IgG (EK1001) for Western blot, and HRP Conjugated anti- Mouse IgG Super Vision Assay Kit (SV0001-1) for IHC(P).
Cross Reactivity	No cross-reactivity with other proteins.
Isotype	Mouse IgG2b
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human Flow Cytometry (Fixed), 1-3ug/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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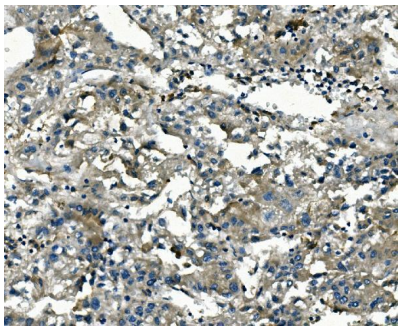
Anti-AKR1D1 Antibody Picoband® (monoclonal, 6I4) (M05278) Images



Western blot analysis of AKR1D1 using anti-AKR1D1 antibody (M05278). 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 HepG2 whole cell lysates; Lane 2: human HL-60 whole cell lysates; Lane 3: human THP-1 whole cell lysates; Lane 4: rat liver tissue lysates; Lane 5: rat RH35 whole cell lysates; Lane 6: mouse liver tissue lysates; Lane 7: mouse HEPA1-6 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-AKR1D1 antigen affinity purified monoclonal antibody (Catalog # M05278) 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-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 AKR1D1 at approximately 37KD. The expected band size for AKR1D1 is at 37KD.



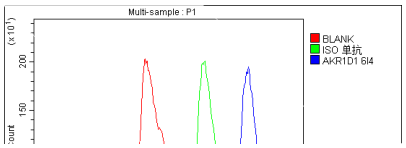
IHC analysis of AKR1D1 using anti-AKR1D1 antibody (M05278). AKR1D1 was detected in paraffin-embedded section of human liver cancer tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml mouse anti-AKR1D1 Antibody (M05278) 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 AKR1D1 using anti-AKR1D1 antibody (M05278). AKR1D1 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 1ug/ml mouse anti-AKR1D1 Antibody (M05278) 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.

Flow Cytometry analysis of HepG2 cells using anti-AKR1D1

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antibody (M05278).Overlay histogram showing HepG2 cells stained with M04586-2 (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 mouse anti-AKR1D1 Antibody (M05278,1ug/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 sample without incubation with primary antibody and secondary antibody (Red line) was used as a blank control.

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