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antibody and ELISA experts

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Anti-AKR1B1 Antibody Picoband™

Catalog Number: PB10035

About AKR1B1

Aldo-keto reductase family 1, member B1 (aldose reductase), also known as AR, is an enzyme that in humans is encoded by the AKR1B1 gene. This gene encodes a member of the aldo/keto reductase superfamily, which consists of more than 40 known enzymes and proteins. This member catalyzes the reduction of a number ofaldehydes, including the aldehyde form of glucose, and is thereby implicated in the development of diabetic complications by catalyzing the reduction of glucose to sorbitol.

Overview

Product Name	Anti-AKR1B1 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-AKR1B1 Antibody Picoband™ catalog # PB10035. Tested in Flow Cytometry, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	Flow Cytometry, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 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	Rabbit
Uniprot ID	P15121

Technical Details

Immunogen	E. coli-derived human AKR1B1 recombinant protein (Position: L228-F316). Human AKR1B1 shares 87.5% amino acid (aa) sequence identity with both mouse and rat AKR1B1.
Predicted Reactive Species	Bovine, Canine, Monkey, Rabbit
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 ug/ml.

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Purification	Immunogen affinity purified.
Suggested Dilutions	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Rat, By Heat Flow Cytometry, 1-3ug/1x10^6 cells, Human

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Anti-AKR1B1 Antibody Picoband™ (PB10035) Images

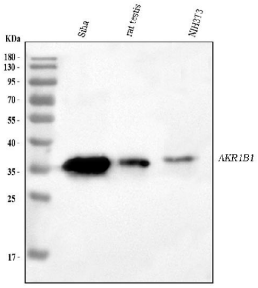

Figure 1. Western blot analysis of AKR1B1 using anti-AKR1B1 antibody (PB10035).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human SiHa whole cell lysates,
Lane 2: rat testis tissue lysates,
Lane 3: mouse NIH/3T3 whole cell 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-AKR1B1 antigen affinity purified polyclonal antibody (Catalog # PB10035) 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 AKR1B1 at approximately 36 kDa. The expected band size for AKR1B1 is at 36 kDa.

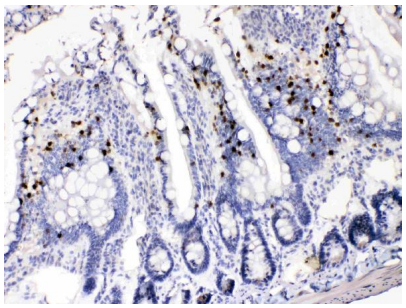

Figure 2. IHC analysis of AKR1B1 using anti-AKR1B1 antibody (PB10035).
AKR1B1 was detected in paraffin-embedded section of rat intestine tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-AKR1B1 Antibody (PB10035) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.

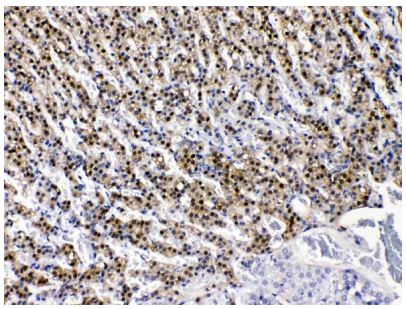

Figure 3. IHC analysis of AKR1B1 using anti-AKR1B1 antibody (PB10035).
AKR1B1 was detected in paraffin-embedded section of rat adrenal gland tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-AKR1B1 Antibody (PB10035) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.

Figure 4. IHC analysis of AKR1B1 using anti-AKR1B1 antibody (PB10035).

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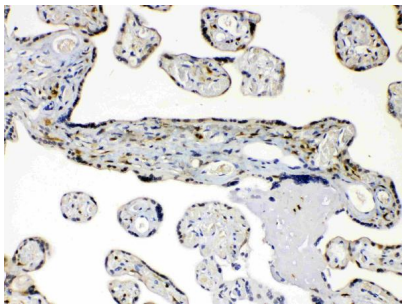

AKR1B1 was detected in paraffin-embedded section of human placenta tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-AKR1B1 Antibody (PB10035) overnight at 4°C. Biotinylated goat anti-rabbit 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 # SA1022) with DAB as the chromogen.

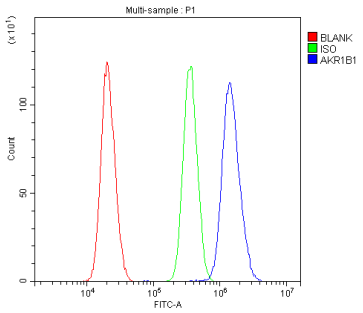

Figure 5. Flow Cytometry analysis of U20S cells using anti-AKR1B1 antibody (PB10035).
Overlay histogram showing U20S cells stained with PB10035 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-AKR1B1 Antibody (PB10035,1ug/1x10^6 cells) for 30 min at 20°C. DyLight®488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10^6 cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10^6) used under the same conditions. Unlabelled sample (Red line) was also used as a control.