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antibody and ELISA experts

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Anti-Intestinal FABP/FABP2 Antibody Picoband®

Catalog Number: PB9943

About FABP2

FABP 2, Fatty acid-binding protein 2, is a protein that in humans is encoded by the FABP2 gene. Using a human cDNA probe, the gene is assigned to chromosome 4 in somatic cell hybrids. FABP 2 gene contains four exons and is an abundant cytosolic protein in small intestine epithelial cells. The FABPs belong to a multigene family with nearly twenty identified members. And FABPs are divided into at least three distinct types, namely the hepatic-, intestinal- and cardiac-type. They form 14-15 kDa proteins and are thought to participate in the uptake, intracellular metabolism and/or transport of long-chain fatty acids. Also, they may be responsible in the modulation of cell growth and proliferation.

Overview

Product Name	Anti-Intestinal FABP/FABP2 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Intestinal FABP/FABP2 Antibody Picoband® catalog # PB9943. Tested in 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	IF, IHC, ICC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na2HPO4, and 0.05 mg NaN3. *This antibody is supplied in a stabilized formulation. Compatibility with conjugation reactions depends on the chemistry of the conjugation method used. For conjugation methods that are not compatible with the stabilizing components present in this formulation, a carrier-free antibody format is required.
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	P12104

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human FABP2/I-FABP, different from the related mouse sequence by seven amino acids, and from the related rat sequence by six amino acids.
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).

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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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunocytochemistry/Immunofluorescence, 2ug/ml, Human Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Human, Mouse, Rat Western blot, 0.1-0.5ug/ml, Human

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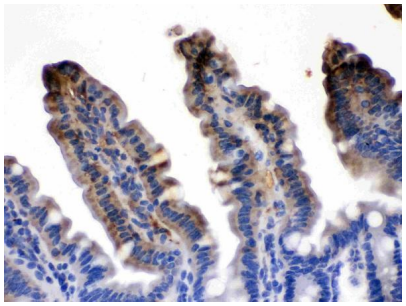
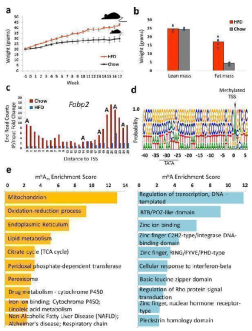
Anti-Intestinal FABP/FABP2 Antibody Picoband® (PB9943) Images

Western blot analysis of FABP2/I-FABP using anti-FABP2/I-FABP antibody (PB9943). 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: SW620 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-FABP2/I-FABP antigen affinity purified polyclonal antibody (Catalog # PB9943) 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 FABP2/I-FABP at approximately 15 kDa. The expected band size for FABP2/I-FABP is at 15 kDa.



IHC analysis of FABP2/I-FABP using anti-FABP2/I-FABP antibody (PB9943). FABP2/I-FABP was detected in a paraffin-embedded section of mouse intestine 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 1 ug/ml rabbit anti-FABP2/I-FABP Antibody (PB9943) 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.



High fat diet mice physiologic parameters and enrichment of m 6 Am-modified genes in GO terms associated with metabolic processes. a Gain in weight of mice fed a high fat diet (HFD) or regular chow diet across weeks. N = 10 (5 HDF mice, and 5 Chow lean control mice), error bars denote SEM. b NMR measurement of lean and fat mass body composition, indicating that the gain in weight was mainly in fat mass. N = 10 (5 HDF mice, and 5 Chow lean control mice). c Fold change of read end counts (IP/Input) within a sliding window of 5 base-pairs around a reported adenosine TSS in the Fabp2 gene in lean (chow) and HFD mice. All adenosines in the sequence are indicated. d Sequence logo of the m 6 Am peaks around and upstream the annotated TSS within the DNA, portraying the canonical m 6 Am genomic consensus. e . Gene ontology analysis of m 6 Am and CDS m 6 A (>50 nt of TSS) showing a clear enrichment of m 6 Am- but not in m 6 A-modified genes, in GO terms associated with metabolic processes. Source data are provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 34893620

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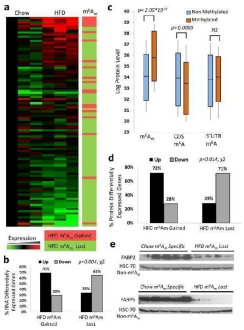
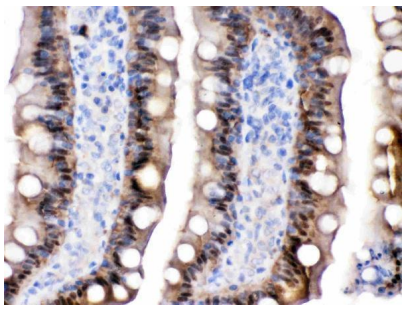
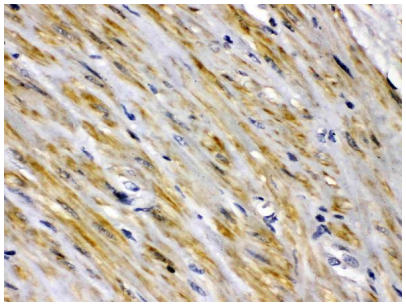


m 6 Am significantly regulates mRNA and protein levels upon high fat diet. a mRNA expression heatmap of >1.5 fold differentially expressed genes with differential m 6 Am methylation in HFD. Heatmap colors represent differential mRNA expression fold-change levels in the respective gene between mice samples (green - lower expression; red - higher expression). Right panel indicates if m 6 Am was gained (light red - HFD specific) or lost (light green - chow specific) in HFD. b Heatmap quantification of the mRNA differentially expressed genes that gained or lost m 6 Am upon HFD. Two-tailed p -value of the Chi-square test is reported. c Log protein expression levels of m 6 Am or m 6 A methylated genes versus non-methylated genes in lean control (chow) mice. Two-tailed p -values of the Mann Whitney U test are reported, covering 2246, 1998, and 5737 genes with the respective locations. Box plots surround the 1–3 quartiles, whiskers denote 1.5 interquartile range. d Full proteomic profiling proportions of genes with protein differential expression >1.5 fold, which gained or lost m 6 Am upon HFD. Two-tailed p -value of the Chi-square test is reported. Full proteomic abundance profiling was conducted on two HFD mice samples and two lean chow control mice samples covering a total of 5914 proteins detected. e Western blot of Fabp2 and Fabp5 genes, which were found decorated with m 6 Am only in lean mice. The results show a clear repeating pattern of overexpression across all lean biological replicates (N = 5) versus all fat biological replicates (N = 4). See Supplementary Fig. for the quantification of these signals. The available molecular weight markers can be seen within the full scan blots which are available as Source data accompanying this figure, provided as a Source Data file. Index in PubMed under a CC BY license. PMID: 34893620



IHC analysis of FABP2/I-FABP using anti-FABP2/I-FABP antibody (PB9943). FABP2/I-FABP was detected in a paraffin-embedded section of rat intestine 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 1 ug/ml rabbit anti-FABP2/I-FABP Antibody (PB9943) 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.



IHC analysis of FABP2/I-FABP using anti-FABP2/I-FABP antibody (PB9943). FABP2/I-FABP was detected in a paraffin-embedded section of human intestinal 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 1 ug/ml rabbit anti-FABP2/I-FABP Antibody (PB9943) 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

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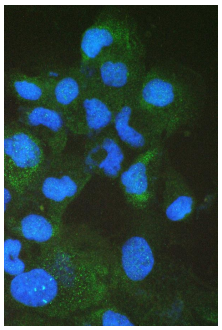
Strepavidin-Biotin-Complex (SABC) (Catalog # SA1022) with DAB as the chromogen.



IF analysis of Intestinal FABP using anti-Intestinal FABP antibody (PB9943). Intestinal FABP was detected in immunocytochemical section of A431 cell. 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 2ug/mL rabbit anti-Intestinal FABP Antibody (PB9943) overnight at 4°C. DyLight®488 Conjugated Goat Anti-Rabbit IgG (BA1127) 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.

1 Publications Citing This Product

1. PubMed ID: 10.1038/s41467-021-27421-2, Dynamic regulation of N6,2′-O-dimethyladenosine (m6Am) in obesity

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Anti-Intestinal FABP/FABP2 Antibody

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