

Anti-FABP4 Antibody Picoband®

Catalog Number: RP1085

About FABP4

Fatty acid binding proteins (FABPs) are small cytoplasmic proteins that are expressed in a highly tissue-specific manner and bind to fatty acids such as oleic and retinoic acid. Adipocyte fatty-acid-binding protein, aP2 (FABP4) is expressed in adipocytes and macrophages, and integrates inflammatory and metabolic responses. Studies in aP2-deficient mice have shown that this lipid chaperone has a significant role in several aspects of metabolic syndrome, including type 2 diabetes and atherosclerosis. It regulates allergic airway inflammation and may provide a link between fatty acid metabolism and asthma.

Overview

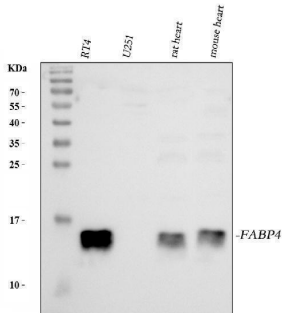
Product Name	Anti-FABP4 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-FABP4 Antibody catalog # RP1085. Tested in IHC, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium antibody that guarantees superior quality, 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	IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains antibody formulated with stabilizing components, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ , and 0.05 mg NaN ₃ . *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	P15090

Technical Details

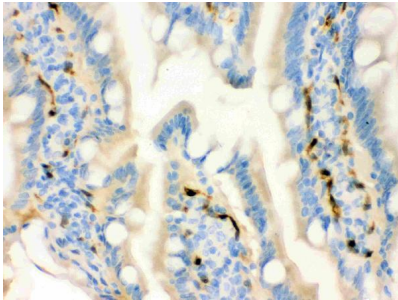
Immunogen	A synthetic peptide corresponding to a sequence at the N-terminus of human FABP4, identical to the related mouse and rat sequences.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG 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.
Purification	Immunogen affinity purified.
Suggested Dilutions	Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml, Mouse, Rat, Human Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

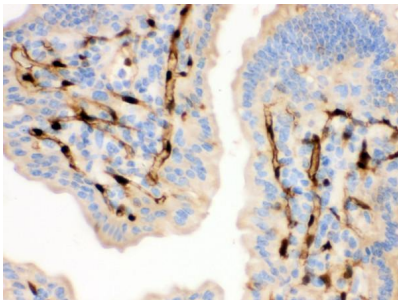
Anti-FABP4 Antibody Picoband® (RP1085) Images



Western blot analysis of FABP4 using anti-FABP4 antibody (RP1085). 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 RT4 whole cell lysates, Lane 2: human U251 whole cell lysates, Lane 3: rat heart tissue lysates, Lane 4: mouse heart 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-FABP4 antigen affinity purified polyclonal antibody (Catalog # RP1085) 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 FABP4 at approximately 15 kDa. The expected band size for FABP4 is at 15 kDa.

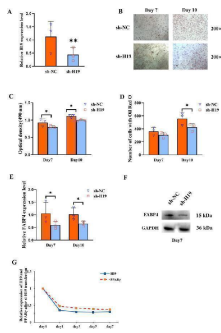


IHC analysis of FABP4 using anti-FABP4 antibody (RP1085). FABP4 was detected in a paraffin-embedded section of Rat Intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-FABP4 Antibody (RP1085) 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.

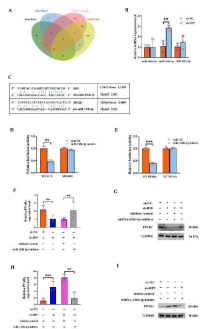


IHC analysis of FABP4 using anti-FABP4 antibody (RP1085). FABP4 was detected in a paraffin-embedded section of Mouse Intestine tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1 ug/ml rabbit anti-FABP4 Antibody (RP1085) 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.

H19 participates in increased adipogenesis of BMSCs and positively regulates PPARgamma expression in SONFH. (A) Expression level of H19 in BMSCs after transfection with sh-H19. (B) Oil Red O staining (200x) of BMSCs after transfection with sh-H19. (C, D) Quantification of Oil Red O



staining (200 \times) of BMSCs after transfection with sh-H19. (E, F) The expression of fatty acid-binding protein 4 (FABP4) was detected by qRT-PCR and Western blot after knocking-down of H19. (G) The expression levels of H19 and PPARgamma 1 week following the knockdown of H19. (n = 3, all data are shown as the mean \pm SD of three independent experiments, *p < 0.05, **p < 0.01).Index in PubMed under a CC BY license. PMID: 40259926



H19 modulates PPARgamma expression through miR-130b-3p. (A) Three databases, StarBase, DIANA tools, and miRWalk, were used to predict candidate micro (mi)RNAs as shown in the Venn diagram. (B) Expression levels of three candidate miRNAs (miR-301b-3p, miR-130b-3p, and miR-130a-3p) after knockdown of H19. (C) The binding sites of miR-130b-3p with H19 and PPARgamma. (D) Effect of miR-130b-3p on the luciferase activity of wild-type (WT)-H19 and mutant (MT)-H19 reporter systems. (E) Effect of miR-130b-3p on the luciferase activity of WT-FABP4 and MT-FABP4 reporter systems was detected via luciferase reporter assay. (F, G) The expression of PPARgamma is significantly decreased upon knocking down H19. This reduction could be reversed through co-transfection with a miR-130b-3p inhibitor. (H, I) The expression of PPARgamma was significantly augmented when H19 was upregulated. This elevation in PPARgamma expression could be counteracted by co-transfecting with a miR-130b-3p mimic. (n = 3, all data are shown as the mean \pm SD of three independent experiments, **p < 0.01, ***p < 0.001).Index in PubMed under a CC BY license. PMID: 40259926

1 Publications Citing This Product

1. PubMed ID: 32018039, Chen G,Wang Q,Li Z,Yang Q,Liu Y,Du Z,Zhang G,Song Y.Circular RNA CDR1as promotes adipogenic and suppresses osteogenic differentiation of BMSCs in steroid-induced osteonecrosis of the femoral head.Bone.2020 Apr;133:115258.doi:10.1016/j.bone.2020.115258.Epub

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Anti-FABP4 Antibody

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