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Anti-Angiopoietin 1/ANGPT1 Antibody Picoband®

Catalog Number: PB9125

About ANGPT1

Angiopoietin 1 is a type of angiopoietin and is encoded by the gene ANGPT1. Angiopoietins are proteins with important roles in vascular development and angiogenesis. All angiopoietins bind with similar affinity to an endothelial cell-specific tyrosine-protein kinase receptor. Angiopoietin 1 is mapped to 8q23.1. The protein encoded by this gene is a secreted glycoprotein that activates the receptor by inducing its tyrosine phosphorylation. It plays a critical role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme. The protein also contributes to blood vessel maturation and stability, and may be involved in early development of the heart. Angiopoietin-1 seems to play a crucial role in mediating reciprocal interactions between the endothelium and surrounding matrix and mesenchyme.

Overview

Product Name	Anti-Angiopoietin 1/ANGPT1 Antibody Picoband®
Reactive Species	Human
Description	Boster Bio Anti-Angiopoietin 1/ANGPT1 Antibody Picoband® catalog # PB9125. Tested in WB applications. This antibody reacts with Human. 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	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	Q15389

Technical Details

Immunogen	E.coli-derived human Angiopoietin 1 recombinant protein (Position: H16-N350). Human Angiopoietin 1 shares 96% amino acid (aa) sequence with both mouse and rat Angiopoietin 1.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western

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	blot.
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	Western blot, 0.1-0.5ug/ml, Human

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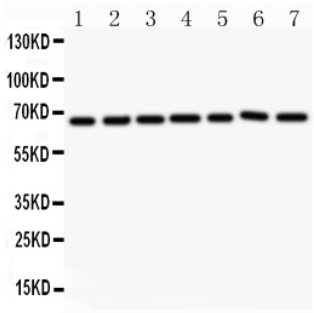
Anti-Angiopoietin 1/ANGPT1 Antibody Picoband® (PB9125) Images

Western blot analysis of Angiopoietin 1 using anti-Angiopoietin 1 antibody (PB9125). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. Lane 1: recombinant human Angiopoietin1 protein 0.5 ng. 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-Angiopoietin 1 antigen affinity purified polyclonal antibody (Catalog # PB9125) 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 Angiopoietin 1 at approximately 39 kDa. The expected band size for Angiopoietin 1 is at 39 kDa.



Western blot analysis of Angiopoietin 1 using anti-Angiopoietin 1 antibody (PB9125). 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 Hela whole cell lysates, Lane 2: human MCF-7 whole cell lysates, Lane 3: human COLO320 whole cell lysates, Lane 4: human A549 whole cell lysates, Lane 5: human HepG2 whole cell lysates, Lane 6: human 293T whole cell lysates, Lane 7: human 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-Angiopoietin 1 antigen affinity purified polyclonal antibody (Catalog # PB9125) 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 Angiopoietin 1 at approximately 65 kDa. The expected band size for Angiopoietin 1 is at 57 kDa.

(A) In the schematic brain diagram, the orange area represents the infarct area. Red boxes indicate the regions where immunofluorescence images were taken. The left side shows the ingrowth of lymphatic vessels on day 28, past stroke. Scale bar: 50 um. (B) The distribution of meningeal lymphatic vessels on day 3 post-stroke in young FTG mice. The white arrow indicates the growth of lymphatic vessels. R: right side, L: left side. Scale bar: 1,000 um. (C) Representative Western blot images of VEGF/GAPDH and

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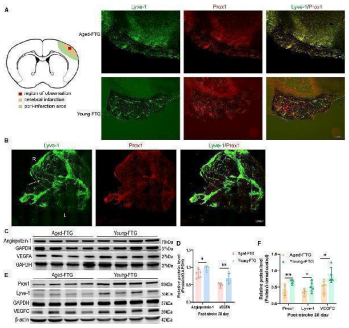
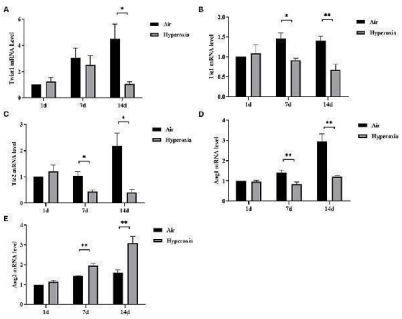
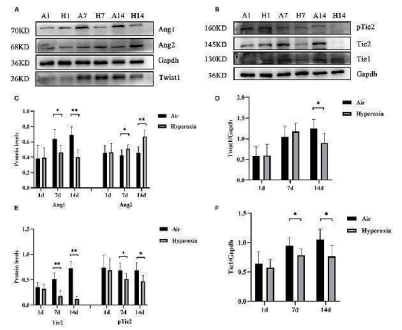


Ang1/GAPDH in the cortex on day 28 post-stroke. (D) Quantification of VEGF/GAPDH and Ang1/GAPDH relative expression on day 28 post-stroke (n = 5 per group). (E) Representative Western blot images of PROX1/GAPDH, Lyve-1/GAPDH, and VEGFC/beta-actin in the cortex on day 28 post-stroke (n = 5 per group). (F) Quantification of PROX1/GAPDH, Lyve-1/GAPDH, and VEGFC/beta-actin relative expression on day 28 post-stroke.* P < 0.05, ** indicates a p- value of < 0.01 in the aged-FTG vs. young-FTG group.Index in PubMed under a CC BY license. PMID: 39371609



Hyperoxia down-regulated pulmonary Twist1, Tie1, Tie2, and Ang1 mRNAs, while up-regulated Ang2 mRNA. Lungs from all different groups were excised, total RNA was isolated, and Twist1 (A) , Tie1 (B) , Tie2 (C) , Ang1 (D) , and Ang2 (E) mRNA levels were determined by real time-PCR following cDNA synthesis, as described in the Materials and Methods section (n = 6/group). * P < 0.05, ** P < 0.01.Index in PubMed under a CC BY license. PMID: 32391293



Hyperoxia reduced pulmonary Twist1, Tie1, Tie2, and Ang1 protein levels, while up-regulated Ang2 protein level. The lung homogenates prepared from different groups of newborn rats were subjected to western blots analysis. Western blots showed the expression of Twist1 (A,D) , Ang1/2 (A,C) , Tie1 (B,F) , pTie2/Tie2 (B,E) in the lungs. The densitometric intensities of these proteins normalized to Gapdh were quantified and shown separately (n = 8–14/group). * P < 0.05, ** P < 0.01.Index in PubMed under a CC BY license. PMID: 32391293

3 Publications Citing This Product

1. PubMed ID: 23554691, Hypoxic response elements and Tet-On advanced double-controlled systems regulate?hVEGF165and?angiopoietin-1?gene expression?in vitro

2. PubMed ID: 23026853, Huang S, Yang N, Liu Y, Gao J, Huang T, Hu L, Zhao J, Li Y, Li C, Zhang X. Int J Mol Med. 2012 Dec;30(6):1410-6. Doi: 10.3892/Ijmm.2012.1147. Epub 2012 Oct 1. Grape Seed Proanthocyanidins Inhibit Colon Cancer-Induced Angiogenesis Throu...

3. PubMed ID: 24979385, Sun Fl, Wang W, Cheng H, Wang Y, Li L, Xue Jl, Wang Xf, Ai Hx, Zhang L, Xu Jd, Wang Xm, Ji Xm. Plos One. 2014 Jun 30;9(6):E101194. Doi: 10.1371/Journal.Pone.0101194. Ecollection 2014. Morroniside Improves Microvascular Functional Integrity Of The ...

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