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antibody and ELISA experts

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Anti-Interleukin-6 IL6 Antibody Picoband®

Catalog Number: PA1352

About Il6

Interleukin-6 (IL-6) is a protein that in humans is encoded by the IL6 gene. IL-6 is an interleukin that acts as both a pro-inflammatory and anti-inflammatory cytokine. It is secreted by T cells and macrophages to stimulate immune response to trauma, especially burns or other tissue damage leading to inflammation. IL-6 is one of the most important mediators of fever and of the acute phase response. IL-6 is also essential for hybridoma growth and is found in many supplemental cloning media such as briclone. Bowcock et al. (1988) assigned the IL6 gene to chromosome 7p21. By in situ hybridization and Southern blot analysis of mouse-human hybrid cell lines, Sutherland et al. (1988) mapped the IL6 gene to chromosome 7p15.

Overview

Product Name	Anti-Interleukin-6 IL6 Antibody Picoband®
Reactive Species	Mouse, Rat
Description	Boster Bio Anti-Interleukin-6 IL6 Antibody catalog # PA1352. Tested in IHC, WB applications. This antibody reacts with 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 4 mg Trehalose, 0.9 mg NaCl and 0.2 mg Na2HPO4.
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	P20607

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of rat IL6, different from the related mouse sequence by two amino acids.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins
Isotype	Rabbit IgG
Form	Lyophilized

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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, Mouse, Rat Immunohistochemistry (Paraffin-embedded Section), 2-5ug/ml, Human

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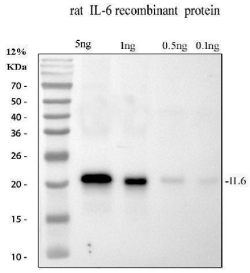
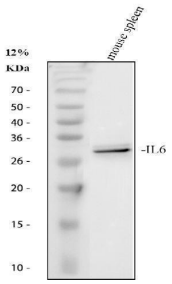
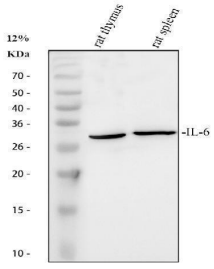
Anti-Interleukin-6 IL6 Antibody Picoband® (PA1352) Images



Western blot analysis of IL6 using anti-IL6 antibody (PA1352). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. Lane 1: recombinant rat IL6 protein 5 ng. Lane 2: recombinant rat IL6 protein 10 ng. Lane 3: recombinant rat IL6 protein 0.5 ng. Lane 4: recombinant rat IL6 protein 0.1 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-IL6 antigen affinity purified polyclonal antibody (PA1352) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for IL6 at approximately 22 kDa.



Western blot analysis of IL6 using anti-IL6 antibody (PA1352). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: mouse spleen 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-IL6 antigen affinity purified polyclonal antibody (PA1352) 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 (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for IL6 at approximately 28-30 kDa. The expected band size for IL6 is at 24 kDa.



Western blot analysis of IL6 using anti-IL6 antibody (PA1352). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat thymus tissue lysates, Lane 2: rat spleen 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-IL6 antigen affinity purified polyclonal antibody (PA1352) 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-

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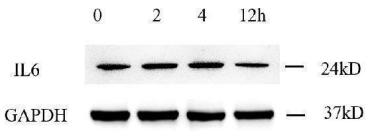
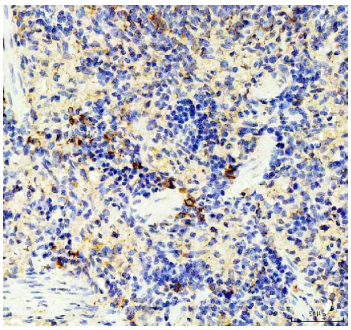
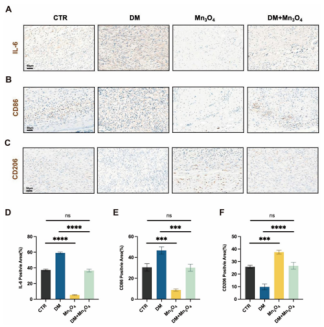
HRP secondary antibody (Catalog # BA1054) at a dilution of 1:5000 for 1.5 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with Tanon 5200 system. A specific band was detected for IL6 at approximately 28-30 kDa. The expected band size for IL6 is at 24 kDa.



Western blot analysis of IL6 using anti-IL6 antibody (PA1352). Electrophoresis was performed on a 12% SDS-PAGE gel at 80V (Stacking gel) / 120V (Resolving gel) for 2 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: human MCF-7 whole cell lysates, Lane 2: 2h drug treated-human MCF-7 whole cell lysates, Lane 3: 4h drug treated-human MCF-7 whole cell lysates, Lane 4: 12h drug treated-human MCF-7 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-IL6 antigen affinity purified polyclonal antibody (PA1352) at 1:500 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 (Catalog # BA1054) at a dilution of 1:2000 for 1 hour at RT. The signal is developed using an ECL Plus Western Blotting Substrate (Catalog # AR1196-200) with ChemiDoc MP system system. A specific band was detected for IL6 at 24 kDa. The expected band size for IL6 is at 24 kDa.

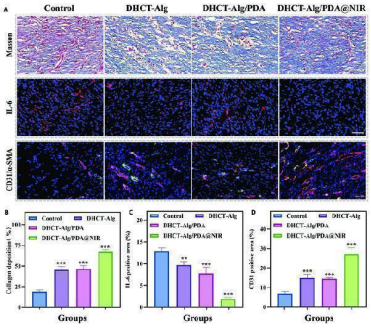


IHC analysis of IL6 using anti-IL6 antibody (PA1352). IL6 was detected in a paraffin-embedded section of rat spleen tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-IL6 Antibody (PA1352) 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.

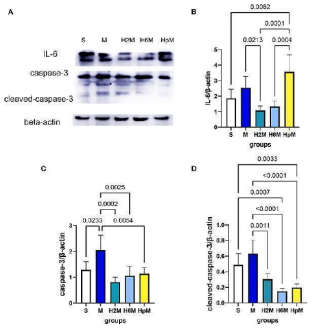


Histological evaluation and statistical analysis of diabetic wound after Mn3O4 treatment by immunohistochemical staining. Immunohistochemical staining of (A) IL-6, (B) CD86 and (C) CD206 in the wound bed at day 7. (D–F) Statistical results of immunohistochemical staining in each group. Data are presented as mean ± SD. Statistical significance was determined using t-test (n = 3, ns = no significance, ***P<0.001, ****P<0.0001).Index in Regenerative Biomaterials under a CC BY license. DOI: 10.1093/rb/rbaf089

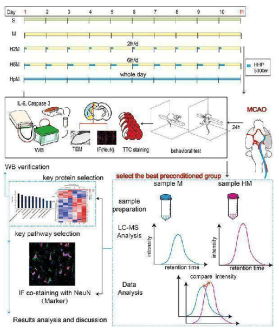
Collagen deposition, inflammation, and angiogenesis analyses in acute large-area wounds. (A) Masson staining and immunofluorescence of IL-6 (red) and CD31 (red) and a-SMA (green) in wound samples. Scale bars: 100 um (top)



and 50 um (middle and bottom). (B to D) Quantification assessment of (B) collagen deposition, (C) IL-6 expression, and (D) CD31 expression. **P < 0.01, ***P < 0.001. Index in PubMed under a CC BY license. PMID: 39109247



Relative expression of IL-6, caspase-3, and cleaved-caspase-3. (A) Immunoblot results of IL-6, caspase-3, and cleaved-caspase-3. (B) Analysis of IL-6 relative expression. One-way ANOVA showed differences among the five groups, F = 10.86, p < 0.0001. (C) Analysis of caspase-3 relative expression. One-way ANOVA showed differences among the five groups, F = 8.50, p = 0.0004. (D) Analysis of cleaved-caspase-3 relative expression. One-way ANOVA showed differences among the five groups, F = 17.36, p < 0.0001. ANOVA, analysis of variance; caspase-3, cysteinyl aspartate specific proteinase 3; IL-6, interleukin 6.Index in PubMed under a CC BY license. PMID: 34975719



Experimental workflow. One hundred four rats were randomly divided into five groups: group S (sham, n = 20), group M (middle cerebral artery occlusion [MCAO], n = 28), group H2M (intermittent hypobaric hypoxia preconditioned MCAO group, 2 h/day, n = 20), group H6M (intermittent hypobaric hypoxia preconditioned MCAO group, 6 h/day, n = 28), and group HpM (persistent hypobaric hypoxia preconditioned MCAO group, n = 28). Behavioral tests and morphological staining (TTC staining) were used to analyze the severity of infarction. Total protein expression of NeuN (a specific marker of mature neurons), caspase-3, cleaved-caspase-3, and IL-6 was estimated using western blotting, which explained the severity of injury from different perspectives. Ultrastructural changes were observed under a transmission electron microscope. The most effective pretreatment group was selected for further label-free proteomic study and provided a reliable direction for mechanism exploration. Western blotting was used to verify the expression of the target protein, and key markers for the biological process were detected using immunofluorescence. caspase-3, cysteinyl aspartate specific proteinase 3; IL-6, interleukin 6; NeuN, neuron-specific nuclear protein; TTC, 2,3,5-triphenyl tetrazolium chloride.Index in PubMed under a CC BY license. PMID: 34975719

Inhibitive effect of nanofiber membranes on anti-inflammation in Il-1beta induced chondrocytes. a Relative mRNA expression levels of Il6, Tnf-a, iNos, Mmp1, Mmp3, and Mmp13 in IL-1beta induced chondrocytes cultured on P, PGF, PF, PPF, or PPGF nanofiber membranes. b Protein expression of MMP13, TNF-a, and IL6 in IL-1beta induced chondrocytes cultured on P, PGF, PF, PPF, or PPGF nanofiber

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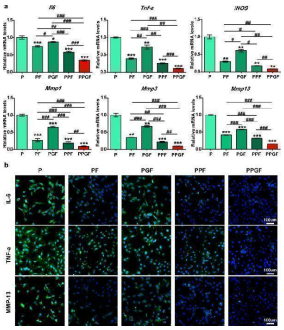
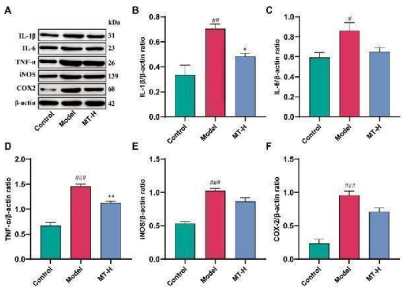
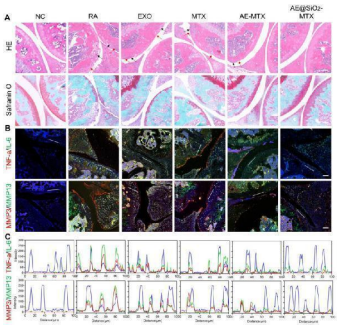


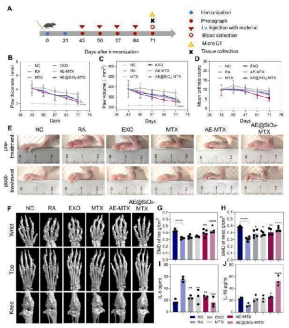
membranes (Scale bars, 100 μm). The values were presented as mean ± SD (n = 3; statistics: one-way ANOVA; # means p



MT inhibited the production of pro-inflammatory proteins in sleep-deprived rats. (A) Western blot bands showing the protein expression levels of IL-1beta, IL-6, TNF-alpha, iNOS, and COX2 in the HP, respectively. (B–F) Relative protein expression level of IL-1beta, IL-6, TNF-alpha, iNOS, and COX2 in the HP, respectively. The data are expressed as the means ± SEM. # p < 0.05, ## p < 0.01, ### p < 0.001 vs Control group; * p < 0.05, ** p < 0.01 vs. Model group.Index in PubMed under a CC BY license. PMID: 39101143



Therapeutic effectiveness evaluated after administering AE@SiO 2 -MTX. (A) Knee joints were stained with HE and safranin O. Scale bar: 100 um. (B) TNF-alpha, IL-6, MMP3 and MMP13 and DAPI staining applied to knee sections. (C) Line profile analysis verified the co-expression and co-localization of TNF-alpha and IL-6, MMP3 and MMP13. Scale bar: 50 um.Index in PubMed under a CC BY license. PMID: 40521182



Intravenous administration of AE@SiO 2 -MTX alleviated arthritis symptoms in CIA mice. (A) Visual outline of the in vivo treatment procedure. (B-D). Quantification of paw thickness, paw volume and arthritis score at multiple intervals after treatments. (E) Illustrative images of hindlimbs from each group before and after treatments. (F) Micro-CT images in 3D of fore paws, hind paws, and knee joints for different treatment groups. (G-H) The evaluation of BMD levels in six groups post-treatments. (I-J) Plasma levels of IL-6 and IL-10 after treatments. Data were expressed as mean±SD. Data were analyzed for statistical significance via One-way ANOVA. * P < 0.05, ** P < 0.01, *** P < 0.001, **** P < 0.0001.Index in PubMed under a CC BY license. PMID: 40521182

PF-127/hADSCs-Exos complex treatment inhibits inflammatory reaction. a Representative images of TNF-alpha immunostaining at 4, 7, and 10 days after treatment. Scale bar = 20 μm. b Quantification of TNF-alpha + IHC stained tissues. c Representative images illustrating IHC results of IL-6 at 4, 7, and 10 days after surgery. Scale bar = 20 μm. d Quantification of IL-6 + IHC stained tissues. e IHC images of wound sections stained with CD68 on days 4, 7,

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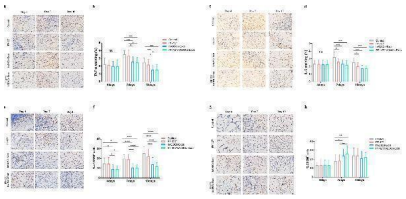

and 10 post-wounding. Scale bar = 20 μm. f Quantification of the number of CD68 positive cells in the wound area on days 4, 7, and 10. g IHC images of wound sections stained with CD206 at days 4, 7, and 10 post-wounding. Scale bar = 20 μm. h Quantification of the number of CD206 positive cells in the wound area on days 4, 7, and 10. In b, d, and f , data are shown as mean ± SEM; n = 6 for each group. * p

41 Publications Citing This Product

1. PubMed ID: 33316740, Tan J,Luo J,Meng C,Jiang N,Cao J,Zhao J. Syringin exerts neuroprotective effects in a rat model of cerebral ischemia through the FOXO3a/NF-kappaB pathway. Int Immunopharmacol.2020 Dec 11;90:107268.doi:10.1016/j. intimp.2020.107268.Epub ahead of print.PMID:333

2. PubMed ID: 28239811, The expression and significance of IL-6, IFN-%u03B3, SM22%u03B1, and MMP-2 in rat model of aortic dissection

3. PubMed ID: 29862173, Transfection with CXCR4 potentiates homing of mesenchymal stem cells in vitro and therapy of diabetic retinopathy in vivo

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