

Anti-Thrombospondin/THBS1 Antibody Picoband®

Catalog Number: A00667-1

About THBS1

THBS1 is also known as Thrombospondin 1, TSP1. The protein encoded by this gene is a subunit of a disulfide-linked homotrimeric protein. It is an adhesive glycoprotein that mediates cell-to-cell and cell-to-matrix interactions. This protein can bind to fibrinogen, fibronectin, laminin, type V collagen and integrins alpha-V/beta-1. It has been shown to play roles in platelet aggregation, angiogenesis, and tumorigenesis. In addition, the thrombospondin-1 protein is a member of the thrombospondin family. It is a multi-domain matrix glycoprotein that has been shown to be a natural inhibitor of neovascularization and tumorigenesis in healthy tissue. Both positive and negative modulation of endothelial cell adhesion, motility, and growth have been attributed to TSP1. This should not be surprising considering that TSP1 interacts with at least 12 cell adhesion receptors, including CD36, alpha v integrins, beta1 integrins, syndecan, and integrin-associated protein (IAP or CD47). It also interacts with numerous proteases involved in angiogenesis, including plasminogen, urokinase, matrix metalloproteinase, thrombin, cathepsin, and elastase.

Overview

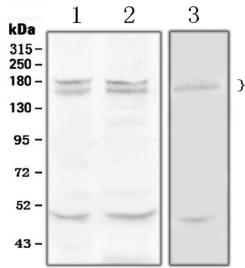
Product Name	Anti-Thrombospondin/THBS1 Antibody Picoband®
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Thrombospondin/THBS1 Antibody Picoband® catalog # A00667-1. Tested in ELISA, WB applications. This antibody reacts with Human, Mouse, Rat. The brand Picoband indicates this is a premium 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	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains 4mg Trehalose, 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	P07996

Technical Details

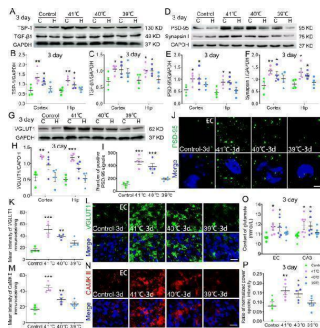
Immunogen	E. coli-derived human Thrombospondin recombinant protein (Position: D27-H112). Human Thrombospondin shares 81.4% amino acid (aa) sequence identity with mouse Thrombospondin.
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot.
Cross Reactivity	No cross-reactivity with other proteins.

Isotype	Rabbit IgG
Form	Lyophilized
Concentration	Adding 0.2 ml of distilled water will yield a concentration of 500 ug/ml.
Purification	Immunogen affinity purified.
Suggested Dilutions	ELISA, 0.1-0.5ug/ml, - Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat

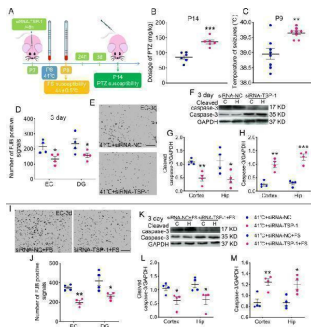
Anti-Thrombospondin/THBS1 Antibody Picoband® (A00667-1) Images



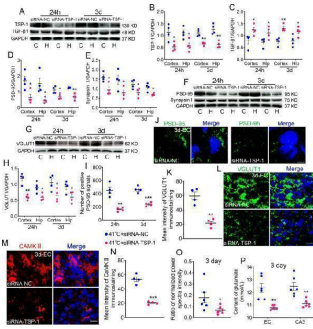
Western blot analysis of Thrombospondin using anti-Thrombospondin antibody (A00667-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: mouse liver tissue lysates, Lane 3: HELA whole Cell lysates. After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA 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-Thrombospondin antigen affinity purified polyclonal antibody (Catalog # A00667-1) 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 1:10000 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 Thrombospondin at approximately 165KD, 180KD. The expected band size for Thrombospondin is at 130KD.



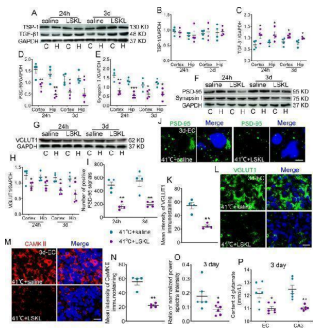
Sub-FS may increase TSP-1/TGF-beta1, excitatory synapse and glutamate levels. A - C Gray bands and normalized gray values of TSP-1 and TGF-beta1 relative to GAPDH at 3 days (n = 4/group). D - H Gray bands and normalized gray values of PSD-95, Synapsin I and VGLUT1 relative to GAPDH at 3 days (n = 4/group). I, J Number of positive PSD-95 signals and representative immunohistochemical results of PSD-95 (green) in EC at 3 days (scale bar = 5 um, n = 4/group). Blue, DAPI. K - N Immunohistochemical results of VGLUT1 (green) and CAMKII (red) in EC at 3 days (scale bar = 10 um, n = 4/group). Blue, DAPI. O Content of glutamate (n = 6/group) in EC and CA3 and (P) ratio of normalized power spectra intensity of beta waves (n = 5/group) at 3 days. Mean ± SEMs were presented. * P



Reduced TSP-1 expression decreases susceptibility and neuronal injury induced by sub-FS stimuli and alleviates neuronal damage induced by subsequent FS stimuli. A Experimental design. B Threshold dosages of PTZ at P14 (n = 6/group). C Threshold body temperature for induction of febrile seizures at P9 (n = 8/group). D, E Analysis and representative images of FJB staining at 3 days after 41°C stimulus (scale bar = 50 um). F - H Gray bands and normalized gray values of cleaved caspase-3 and caspase-3 relative to GAPDH at 3 days after 41°C stimulus. I, J Representative images (scale bar = 50 um) and number of positive signals of FJB staining at 3 days after FS stimuli. K - M Gray bands and quantitative analysis of cleaved caspase-3 and caspase-3 at 3 days after FS stimuli. D - M n = 4/group. Mean ± SEMs were presented. * P



Reduced TSP-1 expression decreases excitatory synapse and glutamate levels. Gray bands and normalized gray values of TSP-1/TGF-beta1 (A - C), PSD-95/synapsin I (D - F) and VGLUT1 (G , H) at 24 hours and 3 days (n = 4/group). The immunohistochemistry results of PSD-95 (green, scale bar = 3 um, I , J), VGLUT1 (green, scale bar = 10 um, K , L) and CAMKII (red, scale bar = 10 um, M , N) in EC. I - N n = 4/group, Blue, DAPI. O Ratio of normalized power spectra intensity of beta waves (n = 5/group) and (P) glutamate content (n = 6/group). Mean \pm SEMs were presented. * P



LSKL administration decreases excitatory synapse and glutamate levels. Gray bands and normalized gray values of TSP-1/TGF-beta1 (A - C), PSD-95/synapsin I (D - F) and VGLUT1 (G , H) at 24 hours and 3 days (n = 4/group). I , J Number of positive PSD-95 signals and representative immunohistochemical results of PSD-95 (green) in EC at 3 days (scale bar = 3 um, n = 4/group). K , L Immunohistochemistry results of VGLUT1 (green) in EC at 3 days (scale bar = 10 um, n = 4/group). M , N Representative immunohistochemical results of CAMKII (red) in EC at 3 days (scale bar = 10 um, n = 4/group). Blue, DAPI. O Ratio of normalized power spectra intensity of beta waves (n = 5/group) and (P) content of glutamate (n = 6/group) at 3 days. Mean \pm SEMs were presented. * P

1 Publications Citing This Product

1. PubMed ID: 28831065, Reactive oxygen species-mediated switching expression of MMP-3 in stromal fibroblasts and cancer cells during prostate cancer progression

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