

Anti-Osteopontin/SPP1 Antibody

Catalog Number: RP1080

About SPP1

Osteopontin (OPN), also known as secreted phosphoprotein 1 (SPP1), is a protein that in humans is encoded by the SPP1 gene (secreted phosphoprotein 1). The protein encoded by this gene is involved in the attachment of osteoclasts to the mineralized bone matrix. And the encoded protein is secreted and binds hydroxyapatite with high affinity. The osteoclast vitronectin receptor is found in the cell membrane and may be involved in the binding to this protein. Also, this protein is a cytokine that upregulates expression of interferon-gamma and interleukin-12. Several transcript variants encoding different isoforms have been found for this gene.

Overview

Product Name	Anti-Osteopontin/SPP1 Antibody
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-Osteopontin/SPP1 Antibody catalog # RP1080. Tested in ELISA, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na ₂ HPO ₄ , 0.05mg NaN ₃ .
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	P10451

Technical Details

Immunogen	A synthetic peptide corresponding to a sequence at the C-terminus of human Osteopontin, different from the related mouse sequence by eight amino acids, and from the related rat sequence by seven amino acids.
Predicted Reactive Species	Hamster
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	Dilute the sample so that the expected range of concentrations fall within the detection range of this kit. If the expected range of concentration is unknown, a pilot test should be conducted to decide the optimal dilution ratio for your samples. Some PubMed article(s) citing the expression level of this target are as follows: Boster Bio's internal QC testing used: Western blot, 0.1-0.5ug/ml, Human, Mouse, Rat, - ELISA , 0.1-0.5ug/ml, Human

Anti-Osteopontin/SPP1 Antibody (RP1080) Images

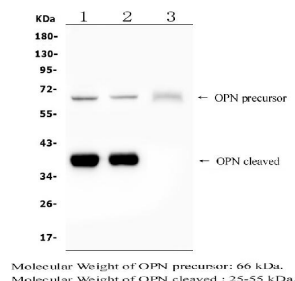


Figure 1. Western blot analysis of Osteopontin using anti-Osteopontin antibody (RP1080).

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 brain tissue lysates,

Lane 2: mouse brain tissue lysates,

Lane 3: human SHG-44 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-Osteopontin antigen affinity purified polyclonal antibody (Catalog # RP1080) 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 Osteopontin at approximately 66,25-55KD. The expected band size for Osteopontin is at 35KD.

10 Publications Citing This Product

1. PubMed ID: 33650080, Li X,Hu B,Wang L,Xia Q,Ni X. P2X7 receptor-mediated phenotype switching of pulmonary artery smooth muscle cells in hypoxia. Mol Biol Rep.2021 Mar 1.doi:10.1007/s11033-021-06222-2. Epub ahead of print.PMID:33650080.
2. PubMed ID: -, Caiyun Mu,Ye He,Yan Hu,Menghuan Li,Maowen Chen,Rong Wang,Yang Xiang, Zhong Luo,Kaiyong Cai,Construction of chemokine substance P-embedded biomimetic multilayer onto bioactive magnesium silicate-titanium implant for bone regeneration,Applied Materials Today
3. PubMed ID: -, Chaowei Hu,Kun Zuo,Kuibao Li,Yuanfeng Gao,Mulei Chen,Roumu Hu,Ye Liu,Hongjie Chi,Hongjiang Wang,Yanwen Qin,Xiaoyan Liu, Jiuchang Zhong,Jun Cai,Xinchun Yang,Jing Li, "p38/JNK Is Required for the Proliferation and Phenotype Changes of Vascular Smooth Muscle

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