

Anti-Sigma1-receptor/SIGMAR1 Antibody Picoband®

Catalog Number: A02493-2

About SIGMAR1

The sigma-1 receptor (σ 1R), one of two sigma receptor subtypes, is a chaperone protein at the endoplasmic reticulum (ER) that modulates calcium signaling through the IP3 receptor. In humans, the σ 1 receptor is encoded by the SIGMAR1 gene. This gene encodes a receptor protein that interacts with a variety of psychotomimetic drugs, including cocaine and amphetamines. The receptor is believed to play an important role in the cellular functions of various tissues associated with the endocrine, immune, and nervous systems. As indicated by its previous name, opioid receptor sigma 1 (OPRS1), the product of this gene was erroneously thought to function as an opioid receptor; it is now thought to be a non-opioid receptor. Mutations in this gene has been associated with juvenile amyotrophic lateral sclerosis 16. Alternative splicing of this gene results in transcript variants encoding distinct isoforms.

Overview

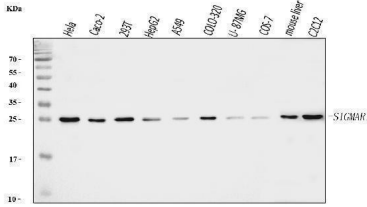
Product Name	Anti-Sigma1-receptor/SIGMAR1 Antibody Picoband®
Reactive Species	Human, Monkey, Mouse, Rat
Description	Boster Bio Anti-Sigma1-receptor/SIGMAR1 Antibody Picoband® catalog # A02493-2. Tested in ELISA, IHC, WB applications. This antibody reacts with Human, Monkey, Mouse, Rat. The brand Picoband 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, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na ₂ HPO ₄ .
Storage Instructions	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 freezing and thawing.
Host	Rabbit
Uniprot ID	Q99720

Technical Details

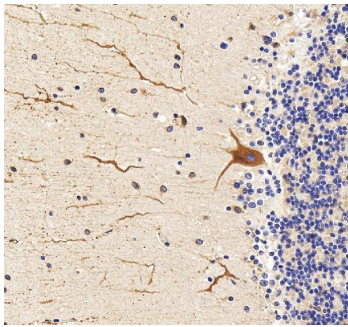
Immunogen	E.coli-derived human Sigma1-receptor/SIGMAR1 recombinant protein (Position: G1-H154).
Recommended Detection Systems	Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western blot, and HRP Conjugated anti-Rabbit IgG Super Vision Assay Kit (SV0002-1) for IHC(P).
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	Western blot, 0.1-0.25 ug/ml, Human, Monkey, Mouse Immunohistochemistry(Paraffin-embedded Section), 2-5 ug/ml, Human, Mouse, Rat ELISA, 0.1-0.5 ug/ml, -

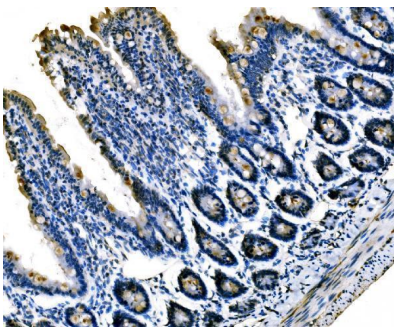
Anti-Sigma1-receptor/SIGMAR1 Antibody Picoband® (A02493-2) Images



Western blot analysis of Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). 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 Caco-2 whole cell lysates, Lane 3: human 293T whole cell lysates, Lane 4: human HepG2 whole cell lysates, Lane 5: human A549 whole cell lysates, Lane 6: human COLO-320 whole cell lysates, Lane 7: human U-87MG whole cell lysates, Lane 8: monkey COS-7 whole cell lysates, Lane 9: mouse liver tissue lysates, Lane 10: mouse C2C12 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-Sigma1-Receptor/SIGMAR1 antigen affinity purified polyclonal antibody (Catalog # A02493-2) at 0.25 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 Sigma1-Receptor/SIGMAR1 at approximately 25 kDa. The expected band size for Sigma1-Receptor/SIGMAR1 is at 25 kDa.

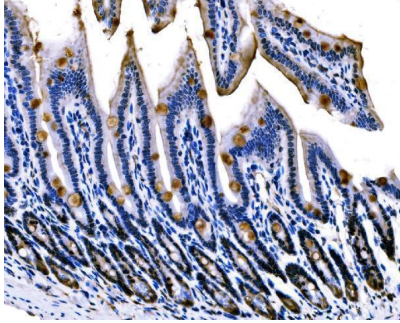


IHC analysis of SIGMAR1 using anti-SIGMAR1 antibody (A02493-2). SIGMAR1 was detected in a paraffin-embedded section of human cerebellum tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-SIGMAR1 Antibody (A02493-2) 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.

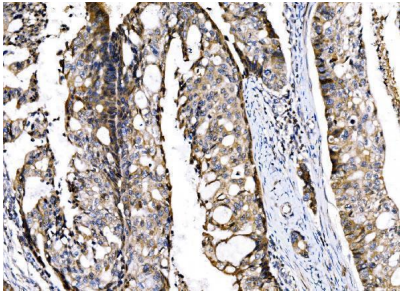


IHC analysis of Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). Sigma1-Receptor/SIGMAR1 was detected in a paraffin-embedded section of rat colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Sigma1-Receptor/SIGMAR1 Antibody (A02493-2) 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

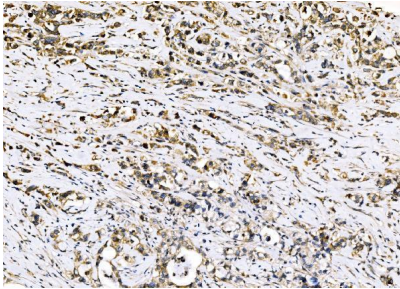
Assay Kit (Catalog # SV0002) with DAB as the chromogen.



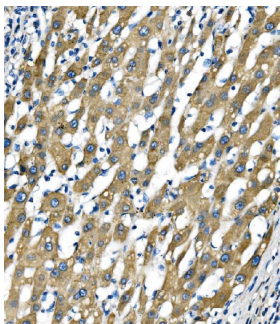
IHC analysis of Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). Sigma1-Receptor/SIGMAR1 was detected in a paraffin-embedded section of mouse colon tissue. Heat mediated antigen retrieval was performed in EDTA buffer (pH 8.0, epitope retrieval solution). The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Sigma1-Receptor/SIGMAR1 Antibody (A02493-2) 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 Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). Sigma1-Receptor/SIGMAR1 was detected in a paraffin-embedded section of human adenocarcinoma of the right colon tissue was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Sigma1-Receptor/SIGMAR1 Antibody (A02493-2) 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 Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). Sigma1-Receptor/SIGMAR1 was detected in a paraffin-embedded section of human stomach cancer tissue was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Sigma1-Receptor/SIGMAR1 Antibody (A02493-2) 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 Sigma1-Receptor/SIGMAR1 using anti-Sigma1-Receptor/SIGMAR1 antibody (A02493-2). Sigma1-Receptor/SIGMAR1 was detected in a paraffin-embedded section of human liver cancer tissue was blocked with 10% goat serum. The tissue section was then incubated with 2 ug/ml rabbit anti-Sigma1-Receptor/SIGMAR1 Antibody (A02493-2) 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.

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Anti-Sigma1-receptor/SIGMAR1 Antibody

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