

Anti-SMOX Antibody Picoband™

Catalog Number: A05519-1

About Smox

Spermine oxidase is an enzyme that in humans is encoded by the SMOX gene. It is mapped to 2; 2 F1. Polyamines are ubiquitous polycationic alkylamines which include spermine, spermidine, putrescine, and agmatine. These molecules participate in a broad range of cellular functions which include cell cycle modulation, scavenging reactive oxygen species, and the control of gene expression. These molecules also play important roles in neurotransmission through their regulation of cell-surface receptor activity, involvement in intracellular signalling pathways, and their putative roles as neurotransmitters. This gene encodes an FAD-containing enzyme that catalyzes the oxidation of spermine to spermadine and secondarily produces hydrogen peroxide. Multiple transcript variants encoding different isoenzymes have been identified for this gene, some of which have failed to demonstrate significant oxidase activity on natural polyamine substrates. The characterized isoenzymes have distinctive biochemical characteristics and substrate specificities, suggesting the existence of additional levels of complexity in polyamine catabolism.

Overview

Product Name	Anti-SMOX Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-SMOX Antibody Picoband™ catalog # A05519-1. Tested in ELISA, Flow Cytometry, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, Flow Cytometry, 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	Q99K82

Technical Details

Immunogen	E.coli-derived mouse SMOX recombinant protein (Position: A40-P555).
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, 0.25-0.5ug/ml Flow Cytometry, 1-3ug/1x10⁶ cells Direct ELISA, 0.1-0.5ug/ml

Anti-SMOX Antibody Picoband™ (A05519-1) Images

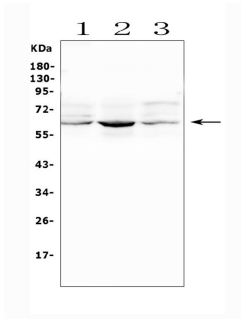


Figure 1. Western blot analysis of SMOX using anti-SMOX antibody (A05519-1).

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: human A549 whole cell lysates,

Lane 2: human PC-3 whole cell lysates,

Lane 3: human U2OS 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-SMOX antigen affinity purified polyclonal antibody (Catalog # A05519-1) 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 SMOX at approximately 62KD. The expected band size for SMOX is at 62KD.

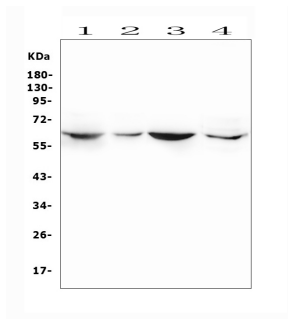


Figure 2. Western blot analysis of SMOX using anti-SMOX antibody (A05519-1).

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 brain issue lysates,

Lane 2: rat heart issue lysates,

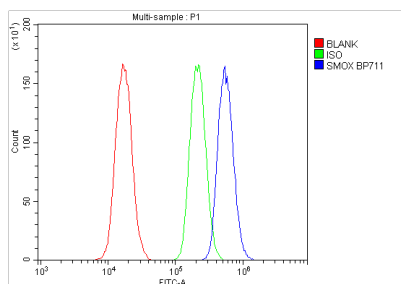
Lane 3: mouse brain issue lysates,

Lane 4: mouse NIH3T3 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-SMOX antigen affinity purified polyclonal antibody (Catalog # A05519-1) 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 SMOX at approximately 62KD. The expected band size for SMOX is at 62KD.

Figure 3. Flow Cytometry analysis of PC-3 cells using anti-SMOX antibody (A05519-1).

Overlay histogram showing PC-3 cells stained with A05519-1 (Blue line).The cells were blocked with 10% normal goat serum. And then incubated with rabbit anti-SMOX Antibody (A05519-1, 1ug/1x10⁶ cells) for 30 min at 20°C.



DyLight® 488 conjugated goat anti-rabbit IgG (BA1127, 5-10ug/1x10⁶ cells) was used as secondary antibody for 30 minutes at 20°C. Isotype control antibody (Green line) was rabbit IgG (1ug/1x10⁶) used under the same conditions. Unlabelled sample (Red line) was also used as a control.

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Anti-SMOX Antibody TM