BOSTER
antibody and ELISA experts

BOSTER BIOLOGICAL TECHNOLOGY
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Anti-GSTA1/A2/A3/A4/A5 Antibody Picoband™

Catalog Number: A01462-1

About GSTA1

Cytosolic and membrane-bound forms of glutathione S-transferase are encoded by two distinct supergene families. These enzymes function in the detoxification of electrophilic compounds, including carcinogens, therapeutic drugs, environmental toxins and products of oxidative stress, by conjugation with glutathione. The genes encoding these enzymes are known to be highly polymorphic. These genetic variations can change an individual's susceptibility to carcinogens and toxins as well as affect the toxicity and efficacy of some drugs. At present, eight distinct classes of the soluble cytoplasmic mammalian glutathione S-transferases have been identified: alpha, kappa, mu, omega, pi, sigma, theta and zeta. This gene encodes a glutathione S-tranferase belonging to the alpha class. The alpha class genes, located in a cluster mapped to chromosome 6, are the most abundantly expressed glutathione S-transferases in liver. In addition to metabolizing bilirubin and certain anti-cancer drugs in the liver, the alpha class of these enzymes exhibit glutathione peroxidase activity thereby protecting the cells from reactive oxygen species and the products of peroxidation.

Overview

Product Name	Anti-GSTA1/A2/A3/A4/A5 Antibody Picoband™
Reactive Species	Human, Mouse, Rat
Description	Boster Bio Anti-GSTA1/A2/A3/A4/A5 Antibody Picoband™ catalog # A01462-1. Tested in ELISA, IHC, WB applications. This antibody reacts with Human, Mouse, Rat.
Application	ELISA, IHC, WB
Clonality	Polyclonal
Formulation	Each vial contains 5mg BSA, 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	GSTA1: P08263

Technical Details

Immunogen	E. coli-derived human GSTA1/A2/A3/A4/A5 recombinant protein (Position: A2-F222).
Predicted Reactive Species	Human
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

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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 Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml ELISA (Cap), 1-5ug/ml

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Anti-GSTA1/A2/A3/A4/A5 Antibody Picoband™ (A01462-1) Images

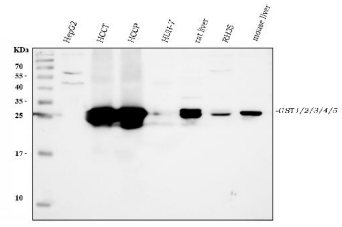

Figure 1. Western blot analysis of GSTA1/A2/A3/A4/A5 using anti-GSTA1/A2/A3/A4/A5 antibody (A01462-1).
Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions.
Lane 1: human HepG2 whole cell lysates,
Lane 2: human HCCT tissue lysates,
Lane 3: human HCCP tissue lysates,
Lane 4: human HUH-7 whole cell lysates,
Lane 5: rat liver tissue lysates,
Lane 6: rat RH35 whole cell lysates,
Lane 7: mouse liver 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-GSTA1/A2/A3/A4/A5 antigen affinity purified polyclonal antibody (Catalog # A01462-1) 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 1:5000 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 GSTA1/A2/A3/A4/A5 at approximately 26 kDa. The expected band size for GSTA1/A2/A3/A4/A5 is at 26 kDa.

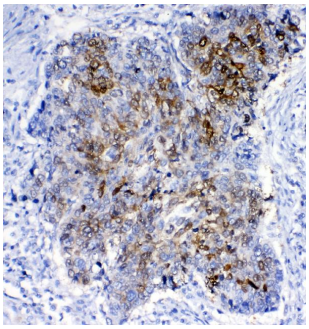

Figure 2. IHC analysis of GSTA1/A2/A3/A4/A5 using anti-GSTA1/A2/A3/A4/A5 antibody (A01462-1).
GSTA1/A2/A3/A4/A5 was detected in paraffin-embedded section of human lung cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GSTA1/A2/A3/A4/A5 Antibody (A01462-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

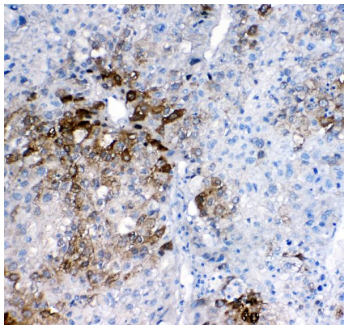

Figure 3. IHC analysis of GSTA1/A2/A3/A4/A5 using anti-GSTA1/A2/A3/A4/A5 antibody (A01462-1).
GSTA1/A2/A3/A4/A5 was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GSTA1/A2/A3/A4/A5 Antibody (A01462-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed

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using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.

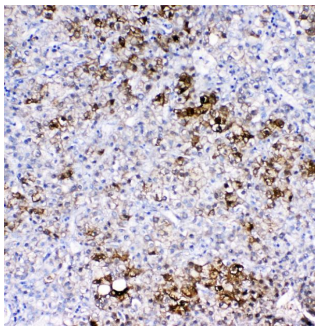

Figure 4. IHC analysis of GSTA1/A2/A3/A4/A5 using anti-GSTA1/A2/A3/A4/A5 antibody (A01462-1).
GSTA1/A2/A3/A4/A5 was detected in paraffin-embedded section of human liver cancer tissues. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GSTA1/A2/A3/A4/A5 Antibody (A01462-1) overnight at 4°C. Biotinylated goat anti-rabbit IgG was used as secondary antibody and incubated for 30 minutes at 37°C. The tissue section was developed using Strepavidin-Biotin-Complex (SABC)(Catalog # SA1022) with DAB as the chromogen.