

## Anti-GALE Antibody Picoband®

Catalog Number: A00551-1

### About GALE

The enzyme UDP-glucose 4-epimerase, also known as UDP-galactose 4-epimerase or GALE, is a homodimeric epimerase found in bacterial, fungal, plant, and mammalian cells. This gene encodes UDP-galactose-4-epimerase which catalyzes two distinct but analogous reactions: the epimerization of UDP-glucose to UDP-galactose, and the epimerization of UDP-N-acetylglucosamine to UDP-N-acetylgalactosamine. The bifunctional nature of the enzyme has the important metabolic consequence that mutant cells (or individuals) are dependent not only on exogenous galactose, but also on exogenous N-acetylgalactosamine as a necessary precursor for the synthesis of glycoproteins and glycolipids. Mutations in this gene result in epimerase-deficiency galactosemia, also referred to as galactosemia type 3, a disease characterized by liver damage, early-onset cataracts, deafness and mental retardation, with symptoms ranging from mild ('peripheral' form) to severe ('generalized' form). Multiple alternatively spliced transcripts encoding the same protein have been identified.

### Overview

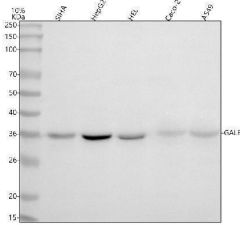
|                      |   |
|----------------------|---|
| Product Name         | Anti-GALE Antibody Picoband®  |
| Reactive Species     | Human, Mouse, Rat   |
| Description          | Boster Bio Anti-GALE Antibody Picoband® catalog # A00551-1. Tested in ELISA, IHC, WB applications. This antibody reacts 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, IHC, WB  |
| Clonality            | Polyclonal  |
| Formulation          | Each vial contains 4mg Trehalose, 0.9mg NaCl, 0.2mg Na <sub>2</sub> HPO <sub>4</sub> , 0.05mg Na <sub>3</sub> N.  |
| 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           | Q14376  |

### Technical Details

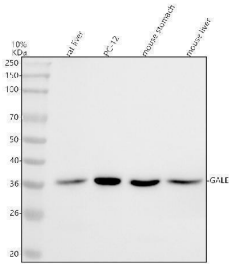
|                               |  |
|-------------------------------|--|
| Immunogen                     | E. coli-derived human GALE recombinant protein (Position: M1-N340).  |
| Recommended Detection Systems | Boster recommends Enhanced Chemiluminescent Kit with anti-Rabbit IgG (EK1002) for Western 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, 0.1-0.5ug/ml<br>Immunohistochemistry (Paraffin-embedded Section), 0.5-1ug/ml<br>ELISA, 0.1-0.5ug/ml |

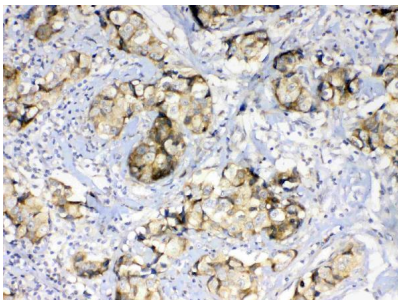
## Anti-GALE Antibody Picoband® (A00551-1) Images



Western blot analysis of GALE using anti-GALE antibody (A00551-1). 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 SiHa whole cell lysates, Lane 2: human HepG2 whole cell lysates, Lane 3: human HEL whole cell lysates, Lane 4: human Caco-2 whole cell lysates, Lane 5: human A549 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-GALE antigen affinity purified polyclonal antibody (Catalog # A00551-1) 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 GALE at approximately 38 kDa. The expected band size for GALE is at 38 kDa.

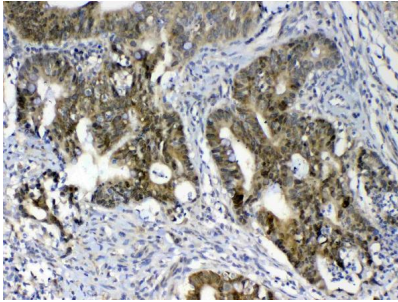


Western blot analysis of GALE using anti-GALE antibody (A00551-1). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 30 ug of sample under reducing conditions. Lane 1: rat liver tissue lysates, Lane 2: rat PC-12 whole cell lysates, Lane 3: mouse stomach tissue lysates, Lane 4: 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-GALE antigen affinity purified polyclonal antibody (Catalog # A00551-1) 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 GALE at approximately 38 kDa. The expected band size for GALE is at 38 kDa.

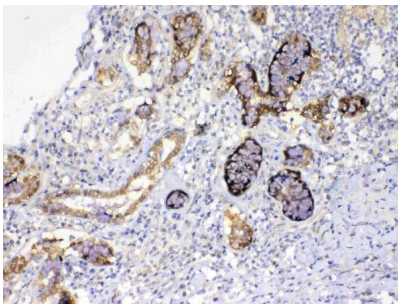


IHC analysis of GALE using anti-GALE antibody (A00551-1). GALE was detected in paraffin-embedded section of human mammary cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GALE Antibody (A00551-1) 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 Streptavidin-Biotin-Complex

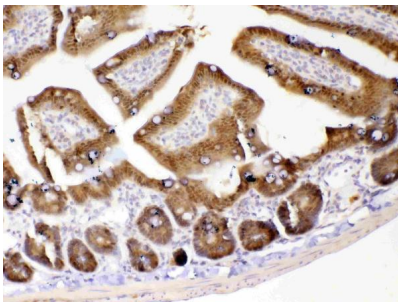
(SABC)(Catalog # SA1022) with DAB as the chromogen.



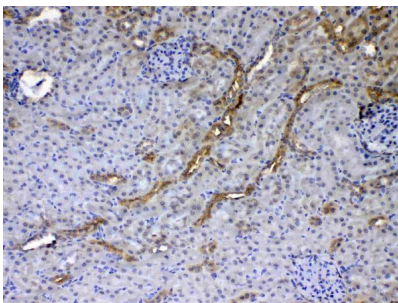
IHC analysis of GALE using anti-GALE antibody (A00551-1). GALE was detected in paraffin-embedded section of human colon cancer tissue. Heat mediated antigen retrieval was performed in citrate buffer (pH6, epitope retrieval solution) for 20 mins. The tissue section was blocked with 10% goat serum. The tissue section was then incubated with 1ug/ml rabbit anti-GALE Antibody (A00551-1) 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.



IHC analysis of GALE using anti-GALE antibody (A00551-1). GALE was detected in paraffin-embedded section of human lung cancer tissue. 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-GALE Antibody (A00551-1) 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.



IHC analysis of GALE using anti-GALE antibody (A00551-1). GALE was detected in paraffin-embedded section of mouse intestine tissue. 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-GALE Antibody (A00551-1) 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.



IHC analysis of GALE using anti-GALE antibody (A00551-1). GALE was detected in paraffin-embedded section of rat kidney tissue. 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-GALE Antibody (A00551-1) 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.

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Anti-GALE Antibody

For Research Use Only. Not for use in diagnostic procedures.