

## GALE Antibody / UDP-glucose 4-epimerase (RQ4034)

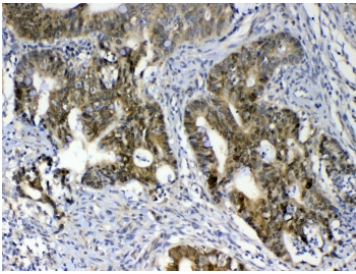
| Catalog No. | Formulation                                           | Size   |
|-------------|-------------------------------------------------------|--------|
| RQ4034      | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

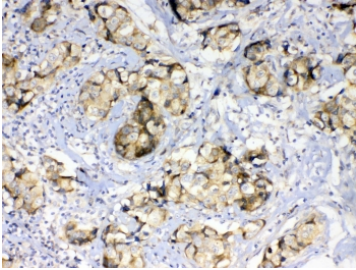
|                           |                                                                                   |
|---------------------------|-----------------------------------------------------------------------------------|
| <b>Availability</b>       | 1-3 business days                                                                 |
| <b>Species Reactivity</b> | Human, Mouse, Rat                                                                 |
| <b>Format</b>             | Antigen affinity purified                                                         |
| <b>Host</b>               | Rabbit                                                                            |
| <b>Clonality</b>          | Polyclonal (rabbit origin)                                                        |
| <b>Isotype</b>            | Rabbit IgG                                                                        |
| <b>Purity</b>             | Antigen affinity purified                                                         |
| <b>Buffer</b>             | Lyophilized from 1X PBS with 2% Trehalose and 0.025% sodium azide                 |
| <b>UniProt</b>            | Q14376                                                                            |
| <b>Localization</b>       | Nuclear, cytoplasmic                                                              |
| <b>Applications</b>       | Western Blot : 0.5-1ug/ml<br>IHC (FFPE) : 1-2ug/ml<br>Direct ELISA : 0.1-0.5ug/ml |
| <b>Limitations</b>        | This GALE antibody is available for research use only.                            |

kDa  
180-  
130-  
95-  
72-  
55-  
43-  
34-  
26-  
  
17-

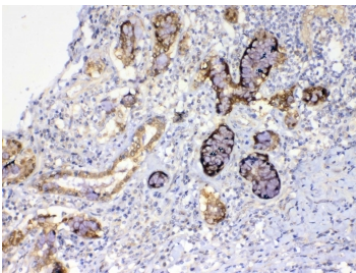
Western blot testing of rat liver lysate with GALE antibody at 0.5ug/ml. Predicted molecular weight ~38 kDa.



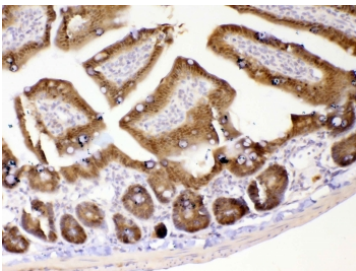
IHC testing of FFPE human colon cancer tissue with GALE antibody at 1ug/ml. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



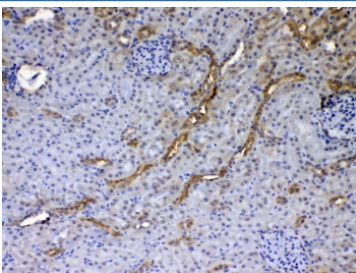
IHC testing of FFPE human breast cancer tissue with GALE antibody at 1ug/ml. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



IHC testing of FFPE human lung cancer tissue with GALE antibody at 1ug/ml. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



IHC testing of FFPE mouse intestine tissue with GALE antibody at 1ug/ml. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.



IHC testing of FFPE rat kidney tissue with GALE antibody at 1ug/ml. Required HIER: steam section in pH6 citrate buffer for 20 min and allow to cool prior to testing.

## Description

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.

## Application Notes

Optimal dilution of the GALE antibody should be determined by the researcher.

## Immunogen

A recombinant human partial protein corresponding to amino acids M1-N340 was used as the immunogen for the GALE antibody.

## Storage

After reconstitution, the GALE antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.