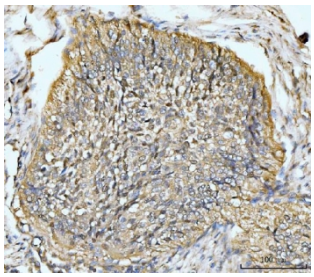
# HMGCS1 Antibody (RQ6644)

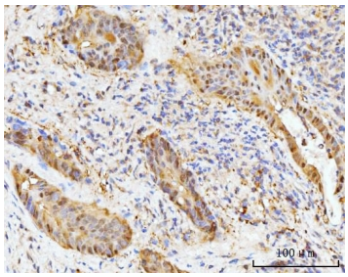
| Catalog No. | Formulation | Size |
|---|---|---|
| RQ6644 | 0.5mg/ml if reconstituted with 0.2ml sterile DI water | 100 ug |

**Bulk quote request**

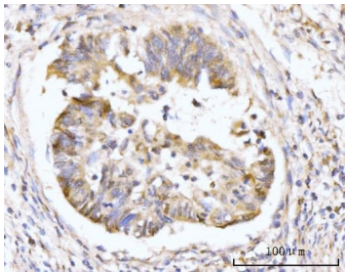
| | |
|---|---|
| **Availability** | 1-3 business days |
| **Species Reactivity** | Human |
| **Format** | Antigen affinity purified |
| **Clonality** | Polyclonal (rabbit origin) |
| **Isotype** | Rabbit IgG |
| **Purity** | Antigen affinity purified |
| **Buffer** | Lyophilized from 1X PBS with 2% Trehalose |
| **UniProt** | Q01581 |
| **Localization** | Cytoplasmic, nuclear |
| **Applications** | Western Blot : 1-2ug/ml<br>Immunohistochemistry (FFPE) : 2-5ug/ml<br>Flow Cytometry : 1-3ug/million cells<br>Immunofluorescence : 5ug/ml<br>Direct ELISA : 0.1-0.5ug/ml |
| **Limitations** | This HMGCS1 antibody is available for research use only. |



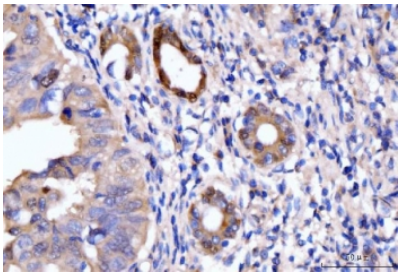
IHC staining of FFPE human lung cancer tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



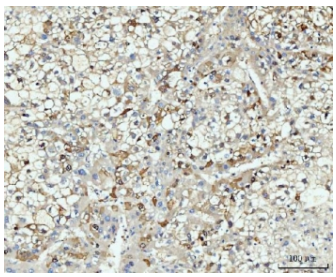
IHC staining of FFPE human gall bladder adenosquamous carcinoma tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



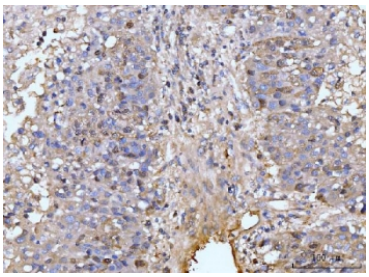
IHC staining of FFPE human gastric adenocarcinoma tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



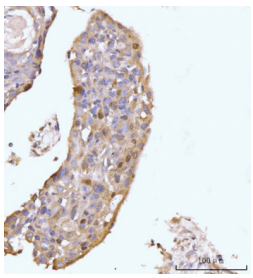
IHC staining of FFPE human gastric adenocarcinoma tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



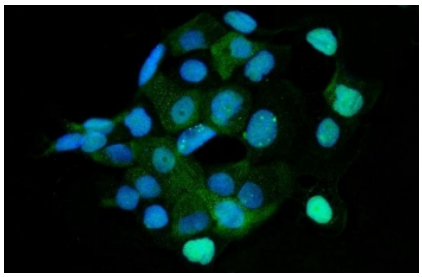
IHC staining of FFPE human liver cancer tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



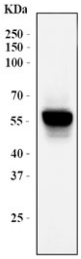
IHC staining of FFPE human liver cancer tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



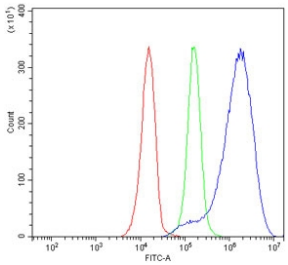
IHC staining of FFPE human esophageal squamous carcinoma tissue with HMGCS1 antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



Immunofluorescent staining of FFPE human A431 cells with HMGCS1 antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH6 citrate buffer for 20 min.




Western blot testing of human HepG2 cell lysate with HMGCS1 antibody. Predicted molecular weight ~57 kDa.




Flow cytometry testing of human JK-1 cells with HMGCS1 antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= HMGCS1 antibody.

## Description

Hydroxymethylglutaryl-CoA synthase or HMG-CoA synthase EC 2.3.3.10 is an enzyme which catalyzes the reaction in which acetyl-CoA condenses with acetoacetyl-CoA to form 3-hydroxy-3-methylglutaryl-CoA (HMG-CoA). Cytoplasmic 3-hydroxy-3-methylglutaryl-CoA synthase (HMGCS1) catalyzes the first committed step of mevalonate pathway essential for cholesterol biosynthesis. HMGCS1 transcription is regulated by sterol levels. Studies showed that miR-223 reduces cholesterol biosynthesis by inhibiting HMGCS1 and methylsterol monooxygenase 1. In addition, activation of the EGFR family member ERBB4 induces the expression of SREBP-regulated genes (including HMGCS1) involved in cholesterol biosynthesis, suggesting a role of this enzyme in the metabolic re-programming in ERBB4-driven cancers.

## Application Notes

Optimal dilution of the HMGCS1 antibody should be determined by the researcher.

## Immunogen

Recombinant human protein (amino acids K251-H520) was used as the immunogen for the HMGCS1 antibody.

## Storage

After reconstitution, the HMGCS1 antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.