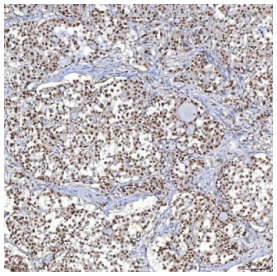
TRMT61A Antibody / tRNA methyltransferase 61A (RQ7670)

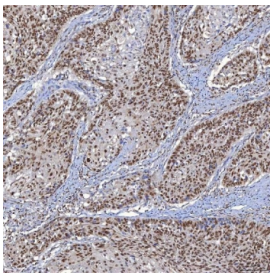
Catalog No.	Formulation	Size
RQ7670	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

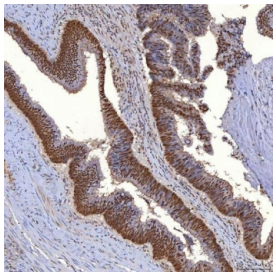
Availability	1-3 business days
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit IgG
Purity	Antigen affinity purified
Buffer	Lyophilized from 1X PBS with 2% Trehalose
UniProt	Q96FX7
Localization	Nuclear
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells Immunofluorescence: 5ug/ml Direct ELISA: 0.1-0.5ug/ml
Limitations	This TRMT61A/tRNA methyltransferase 61A antibody is available for research use only.



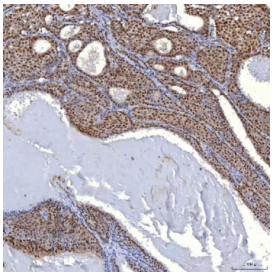
Immunohistochemistry analysis of TRMT61A / tRNA methyltransferase 61A antibody in human lung adenocarcinoma tissue. Formalin-fixed, paraffin-embedded human lung adenocarcinoma tissue was stained using TRMT61A / tRNA methyltransferase 61A antibody. Heat-induced epitope retrieval was performed by boiling tissue sections in EDTA buffer, pH 8.0, for 20 minutes, followed by cooling prior to antibody incubation. Brown chromogenic signal is observed predominantly in the nuclei and cytoplasm of tumor epithelial cells forming glandular structures, while surrounding stromal regions show comparatively reduced staining. This staining pattern reflects cellular expression of TRMT61A in lung adenocarcinoma tissue.



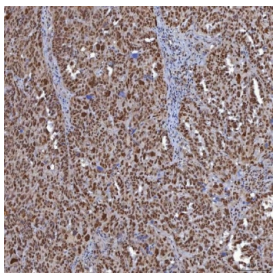
IHC staining of FFPE human larynx squamous cell carcinoma tissue with TRMT61A/tRNA methyltransferase 61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



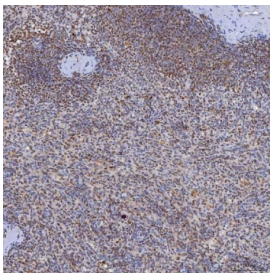
IHC staining of FFPE human colon adenocarcinoma tissue with TRMT61A/tRNA methyltransferase 61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



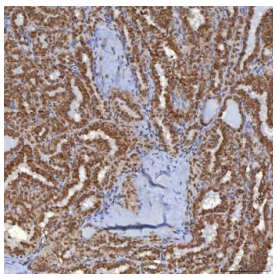
IHC staining of FFPE human breast cancer tissue with TRMT61A/tRNA methyltransferase 61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



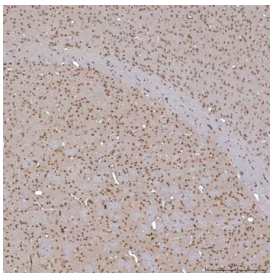
IHC staining of FFPE human ovarian serous cancer tissue with TRMT61A/tRNA methyltransferase 61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



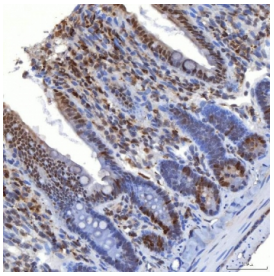
IHC staining of FFPE human spleen tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



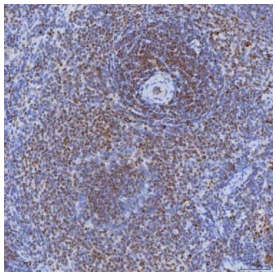
IHC staining of FFPE human thyroid cancer tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



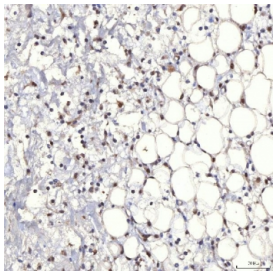
IHC staining of FFPE mouse brain tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



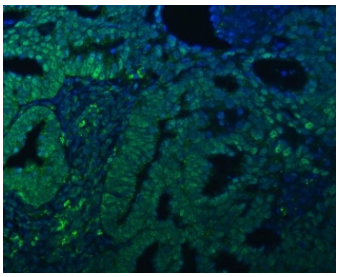
IHC staining of FFPE rat colon tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



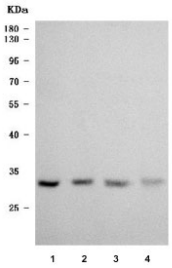
IHC staining of FFPE rat spleen tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



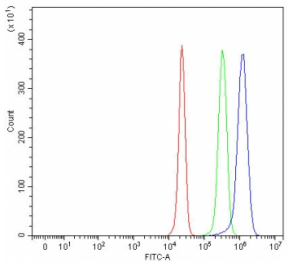
IHC staining of FFPE rat skin tissue with TRMT61A antibody. HIER: boil tissue sections in pH8 EDTA for 20 min and allow to cool before testing.



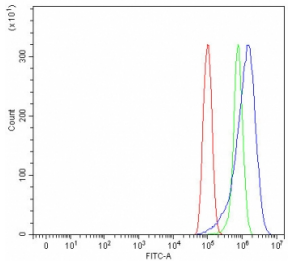
Immunofluorescent staining of FFPE human ovarian cancer tissue with TRMT61A/tRNA methyltransferase 61A antibody (green) and DAPI nuclear stain (blue). HIER: steam section in pH8 EDTA buffer for 20 min.



Western blot testing of human 1) PC-3, 2) Caco-2, 3) MCF7 and 4) HaCaT cell lysate with TRMT61A/tRNA methyltransferase 61A antibody. Predicted molecular weight ~31 kDa.



Flow cytometry testing of human HepG2 cells with TRMT61A antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TRMT61A antibody.



Flow cytometry testing of human PC-3 cells with TRMT61A antibody at 1ug/million cells (blocked with goat sera); Red=cells alone, Green=isotype control, Blue= TRMT61A antibody.

Description

TRMT61A Antibody recognizes tRNA methyltransferase 61A, also known as TRMT61A, N1-adenosine methyltransferase 61A, and m1A RNA methyltransferase, a catalytic enzyme responsible for N1-methyladenosine modification in transfer RNA. TRMT61A forms a functional heterodimeric complex with TRMT6 and serves as the catalytic subunit of the TRMT6-TRMT61A complex that mediates m1A58 methylation of tRNA molecules. TRMT61A Antibody is frequently referenced in studies of RNA methylation, epitranscriptomics, and post-transcriptional gene regulation and is commonly described as TRMT61A antibody or tRNA m1A methyltransferase antibody.

tRNA methyltransferase 61A plays a central role in the installation of N1-methyladenosine modifications that stabilize tRNA structure, maintain proper folding, and support accurate translation. The m1A modification at position 58 of tRNA is essential for tRNA maturation, ribosome interaction, and translational fidelity. As an m1A methyltransferase and RNA modification enzyme, TRMT61A contributes to the broader epitranscriptomic landscape that regulates RNA stability and cellular protein synthesis. Expression of TRMT61A is typically detected in the cytoplasm and nucleus of proliferative and metabolically active cells where active RNA processing and translation occur.

Altered TRMT61A expression and dysregulated RNA methylation have been investigated in cancer biology, cellular stress responses, and metabolic adaptation. Changes in m1A RNA modification patterns have been associated with tumor progression, altered translational control, and adaptive stress signaling pathways. Consequently, TRMT61A antibody staining or detection is commonly examined in research focused on RNA modification pathways, translational regulation, and epitranscriptomic remodeling in normal and diseased tissues.

At the molecular level, TRMT61A functions as a SAM-dependent methyltransferase that catalyzes the transfer of a methyl group to adenosine residues in tRNA substrates. Its essential role in RNA methylation and tRNA maturation makes TRMT61A Antibody a valuable tool for studies investigating RNA modification enzymes, m1A epitranscriptomic regulation, and translational control mechanisms.

Application Notes

Optimal dilution of the TRMT61A/tRNA methyltransferase 61A antibody should be determined by the researcher.

Immunogen

E. coli-derived recombinant human protein (amino acids M1-G289) was used as the immunogen for the TRMT61A/tRNA methyltransferase 61A antibody.

Storage

After reconstitution, the TRMT61A/tRNA methyltransferase 61A antibody can be stored for up to one month at 4oC. For long-term, aliquot and store at -20oC. Avoid repeated freezing and thawing.

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