SYSY Antibodies

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m6A

Cat.No. 202 003; Polyclonal rabbit antibody, 50 µg specific antibody (lyophilized)

Data Sheet

Reconstitution/ Storage	50 µg specific antibody, lyophilized. Affinity purified with the immunogen. Albumin and azide were added for stabilization. For **reconstitution** add 50 µl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C to -80°C until use. Antibodies should be stored at +4°C when still lyophilized. Do not freeze! For detailed information, see back of the data sheet.
Applications	**Dot blot**: 1 : 1000 up to 1 : 10000 **IP**: yes **ICC**: not tested yet **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet **ELISA**: suitable for sandwich-ELISA **MeRIP**: yes
Immunogen	N6-methyladenosine fused to BSA
Reactivity	Reacts with: human, rat, mouse, eukaryotes, prokaryotes. Other species not tested yet.
Specificity	Specific for N6-methyladenosine (m6A) with some cross-reactivity to m6Am.

TO BE USED IN VITRO / FOR RESEARCH ONLY
NOT TOXIC, NOT HAZARDOUS, NOT INFECTIOUS, NOT CONTAGIOUS

Background

m6A (N6-methyladenosine) is a posttranscriptional RNA-modification found throughout all kingdoms, e.g. in vertebrate snRNAs U2, U4, U6, in viral and eukaryotic mRNAs, and in E. coli 16S rRNA. Recent studies have found that mRNA is predominately m6A modified at stop codons and long internal exons, which are conserved between mouse and human. The so-called RNA methylome probably plays an important role in in the regulation of gene expression.
In E. coli Dam methylase introduces m6A modifications on the DNA level at the 5'-GATC-3' motif. This allows the cell to differentiate between the parental and the daughter strand during mismatch repair.

Selected References for 202 003

N6-methyladenine DNA Modification in Glioblastoma.
Xie Q, Wu TP, Gimple RC, Li Z, Prager BC, Wu Q, Yu Y, Wang P, Wang Y, Gorkin DU, Zhang C, et al.
Cell (2018) : . . **DOTBLOT, IP, ICC, IHC-P; tested species: human**

Multiplexed profiling facilitates robust m6A quantification at site, gene and sample resolution.
Dierks D, Garcia-Campos MA, Uzonyi A, Safra M, Edelheit S, Rossi A, Sideri T, Varier RA, Brandis A, Stelzer Y, van Werven F, et al.
Nature methods (2021) : . . **IP; tested species: mouse**

Extracellular matrix stiffness reduces DNA 6 ma level to facilitate colorectal cancer progression via disrupting P53 binding to CDKN1A promoter.
Xie SA, Li X, Yin MY, Du F, Zhang ST, Zhu ST
Experimental hematology & oncology (2025) 141: 111. . **DOTBLOT, IP, IHC, ELISA; tested species: human,mouse**

Epstein-Barr virus suppresses N6-Methyladenosine modification of TLR9 to promote immune evasion.
Zhang X, Li Z, Peng Q, Liu C, Wu Y, Wen Y, Zheng R, Xu C, Tian J, Zheng X, Yan Q, et al.
The Journal of biological chemistry (2024) : 107226. . **WB, MERIP, DOTBLOT; tested species: human**

Colchicine Blocks Abdominal Aortic Aneurysm Development by Maintaining Vascular Smooth Muscle Cell Homeostasis.
Chen M, Yang D, Zhou Y, Yang C, Lin W, Li J, Liu J, Ye J, Huang W, Ma W, Li W, et al.
International journal of biological sciences (2024) 206: 2092-2110. . **DOTBLOT, IHC, MERIP; tested species: mouse,human**

Reversible ALKBH5 cytosolic aggregation accelerates cellular senescence.
Chen L, Chen Z, Mo J, Xie Q, Lin W, Zheng H, Zou Y, Chen Y, Bian XW, Zhou Z, Jin G, et al.
Cell death and differentiation (2025) : . . **DOTBLOT, ICC, MERIP; tested species: human,mouse**

Multichrome encoding-based multiplexed, spatially resolved imaging reveals single-cell RNA epigenetic modifications heterogeneity.
Mao D, Tang X, Zhang R, Hu S, Gou H, Zhang P, Li W, Pan Q, Shen B, Zhu X
Nature communications (2025) 161: 958. . **ICC, IHC, MERIP; tested species: human,mouse**

METTL3 Promotes Osteogenic Differentiation of Human Periodontal Ligament Stem Cells through IGF2BP1-Mediated Regulation of Runx2 Stability.
Sun X, Meng X, Piao Y, Dong S, Dong Q
International journal of medical sciences (2024) 214: 664-673. . **DOTBLOT, IP, ICC; tested species: human**

Decoding the interplay between m6A modification and stress granule stability by live-cell imaging.
Li Q, Liu J, Guo L, Zhang Y, Chen Y, Liu H, Cheng H, Deng L, Qiu J, Zhang K, Goh WSS, et al.
Science advances (2024) 1046: eadp5689. . **DOTBLOT, ICC, MERIP; tested species: human**

METTL3 enhances dentinogenesis differentiation of dental pulp stem cells via increasing GDF6 and STC1 mRNA stability.
Pan Y, Liu Y, Cui D, Yu S, Zhou Y, Zhou X, Du W, Zheng L, Wan M
BMC oral health (2023) 231: 209. . **IP, DOTBLOT, IHC-P; tested species: mouse**

Downregulation of ALKBH5 rejuvenates aged human mesenchymal stem cells and enhances their therapeutic efficacy in myocardial infarction.
Gao X, Liang X, Liu B, Hong Y, He H, Shen Y, Chen J, Huang X, Hu B, Li W, Li X, et al.
FASEB journal : official publication of the Federation of American Societies for Experimental Biology (2023) 3712: e23294. . **IP, DOTBLOT, ICC; tested species: human**

Access the online factsheet including applicable protocols at https://sysy.com/product/202003 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All SYSY antibodies and control proteins/peptides are shipped lyophilized (vacuum freeze-dried). In this form, they remain stable without loss of quality at ambient temperatures for several weeks.

Storage of Sealed Vials after Delivery

- **Unlabeled** and **biotin-labeled antibodies** and **control proteins** should be stored at **4°C** before reconstitution. **Do not freeze lyophilized antibodies**. Temperatures below 0°C may impair performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long-term storage of lyophilized fluorophore-conjugates may cause aggregation.
- **Control peptides** should be stored at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- **Do not use frost-free ("no-frost") freezers.** These units periodically warm to remove ice buildup, causing freeze–thaw cycles that can damage antibodies.
- Store vials in areas with minimal temperature fluctuation - preferably toward the back of the freezer, not on the door.
- Aliquot reconstituted antibodies and store at –20°C to –80°C.
- Avoid very small aliquots (<20 µL), as evaporation and adsorption to tube surfaces can reduce antibody concentration and activity.
- Use the smallest practical storage vial to minimize surface area.
- Adding glycerol to a final concentration of 50% prevents freezing at -20°C, allowing storage in liquid form and effectively avoiding freeze–thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C

Monoclonal Antibodies

- **Ascites and hybridoma supernatant:** Store at -20°C to -80°C
  Prolonged storage at 4°C is not recommended, as proteases present in ascites may degrade antibodies.
- **Purified IgG:** Store at -20°C to -80°C
  Adding a carrier protein (e.g., BSA) enhances long-term stability.
  Many SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Polyclonal Antibodies

- **Crude antisera:** Can be stored at 4°C with antimicrobials added, but -20°C to -80°C is preferred
- **Affinity-purified antibodies:** Less stable than antisera; store at -20°C to -80°C
  Adding a carrier protein such as BSA improves long-term stability.
  Most SYSY antibodies already contain carrier proteins - refer to the respective datasheet for details.

Fluorescence-labeled Antibodies

- Store as a liquid with 1:1 (v/v) glycerol at -20°C, and protect from light exposure

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All purified SYSY antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the volume of deionized water specified in the corresponding datasheet. If a larger final volume is desired, first add the recommended amount of water, then adjust with PBS and, if needed, add a stabilizing carrier protein (e.g., BSA) to a final concentration of 2%. Some SYSY antibodies already contain albumin; please take this into account before adding additional carrier protein.

For complete reconstitution, carefully remove the vial cap. After adding water, briefly vortex the solution. To collect the liquid at the bottom of the vial, place the vial inside a 50 ml centrifuge tube padded with paper and centrifuge briefly.

- If desired, small amounts of azide or thimerosal may be added to prevent microbial growth. This is particularly recommended when storing an aliquot at 4°C.
- After reconstitution of fluorescence-labeled antibodies, add glycerol 1:1 (v/v) to achieve a final concentration of 50%. This prevents freezing at –20°C and keeps the antibody in liquid form, effectively avoiding freeze–thaw cycles.
- Glycerol may also be added to unlabeled primary antibodies as a general measure to prevent freeze–thaw damage.
- For further guidance, please refer to our **storage tips** and recommendations for reconstituted antibodies, control peptides, and control proteins.