SYSY Antibodies

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Jmjd6

Cat.No. 277 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Azide was added before lyophilization. For **reconstitution** add 100 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	**WB**: not recommended **IP**: not tested yet **ICC**: 1 : 500 **IHC**: not tested yet **IHC-P (FFPE)**: not tested yet
Clone	mAb328
Subtype	IgG2a (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 403 from human Jmjd6 (UniProt Id: Q6NYC1)
Reactivity	Reacts with: human (Q6NYC1), rat (Q6AYK2), mouse (Q9ERI5). Other species not tested yet.
Specificity	K.O. validated PubMed: 26531897

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

Background

The nuclear protein **Jmjd 6** belongs to the family Jumonji domain containing proteins and catalyses the lysyl-hydroxylation of the splicing factor U2AF65. This influences alternative splicing of several endogenous and reporter genes.
In addition it has been shown to mediate the lysyl-hydroxylation of histones suggesting an implication in epigenetic regulation of gene expression or chromosomal rearangements.

Selected References for 277 011

Intronic regulation of Aire expression by Jmjd6 for self-tolerance induction in the thymus.
Yanagihara T, Sanematsu F, Sato T, Uruno T, Duan X, Tomino T, Harada Y, Watanabe M, Wang Y, Tanaka Y, Nakanishi Y, et al.
Nature communications (2015) 6: 8820. . **ICC; KO verified**

JMJD6 modulates DNA damage response through downregulating H4K16ac independently of its enzymatic activity.
Huo D, Chen H, Cheng Y, Song X, Zhang K, Li MJ, Xuan C
Cell death and differentiation (2019) : . . **ICC; tested species: human**

Analysis of Jmjd6 cellular localization and testing for its involvement in histone demethylation.
Hahn P, Wegener I, Burrells A, Böse J, Wolf A, Erck C, Butler D, Schofield CJ, Böttger A, Lengeling A
PloS one (2010) 510: e13769. .

Selected General References

High expression of JMJD6 predicts unfavorable survival in lung adenocarcinoma.
Zhang J et al. Tumour Biol. (2013) PubMed:23595221

Lysyl 5-hydroxylation, a novel histone modification, by Jumonji domain containing 6 (JMJD6).
Unoki M et al. J. Biol. Chem. (2013) PubMed:23303181

JMJD6 is a driver of cellular proliferation and motility and a marker of poor prognosis in breast cancer.
Lee YF et al. Breast Cancer Res. (2012) PubMed:22621393

The 2-oxoglutarate-dependent oxygenase JMJD6 catalyses oxidation of lysine residues to give 5S-hydroxylysine residues.
Mantri M et al. Chembiochem (2011) PubMed:22238144

Jumonji domain-containing protein 6 (Jmjd6) is required for angiogenic sprouting and regulates splicing of VEGF-receptor 1.
Boeckel JN et al. Proc. Natl. Acad. Sci. U.S.A. (2011) PubMed:21300889

Jmjd6 catalyses lysyl-hydroxylation of U2AF65, a protein associated with RNA splicing.
Webby CJ et al. Science (2009) PubMed:19574390

JMJD6 is a histone arginine demethylase.
Chang B et al. Science (2007) PubMed:17947579

Access the online factsheet including applicable protocols at https://sysy.com/product/277011 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.