SYSY Antibodies

Rudolf-Wissell-Str. 28a
37079 Göttingen, Germany
Phone: +49 551-50556-0
Fax: +49 551-50556-384
E-mail: sales@sysy.com
Web: www.sysy.com

U1-70k

Cat.No. 203 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 µg purified IgG, lyophilized. Albumin and azide were added for stabilization. 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**: 1 : 500 up to 1 : 1000 (AP staining) **IP**: yes **ICC**: 1 : 500 **IHC**: yes **IHC-P**: 1 : 500 **FACS**: yes
Clone	H111
Subtype	IgG2a (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 437 from human U1-70k (UniProt Id: P08621)
Epitop	AA 1 to 275 from human U1-70k (UniProt Id: P08621)
Reactivity	Reacts with: human (P08621), rat, mouse (Q62376), mammals. Other species not tested yet.

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

Background

In eukaryotic cells introns are removed from pre-mRNAs by the splicesome which consists of the U1, U2, U4, U5 and U6 small nuclear ribonucleoprotein particles (snRNPs) and other proteins.
Binding of the 5´-splicing site to the U1 snRNP is one of the first steps in the spliceosome assembly. This interaction involves base-pairing between the U1 snRNA and conserved sequences spanning the 5´-splice site.
U1-70k is a member of the U1 snRNP. It has an RNA binding domain (RBD) and directly interacts with stem-loop I of U1 snRNA.

Selected References for 203 011

tRIP-seq reveals repression of premature polyadenylation by co-transcriptional FUS-U1 snRNP assembly.
Masuda A, Kawachi T, Takeda JI, Ohkawara B, Ito M, Ohno K
EMBO reports (2020) 215: e49890. . **WB, IP; tested species: mouse**

Synergistic enhancement of production of proinflammatory cytokines of human peripheral blood monocytes by anti-Sm and anti-RNP antibodies.
Matsueda Y, Arinuma Y, Nagai T, Hirohata S
PloS one (2018) 1312: e0209282. . **FACS; tested species: human**

Evidence for a direct role of the disease modifier SCNM1 in splicing.
Howell VM, Jones JM, Bergren SK, Li L, Billi AC, Avenarius MR, Meisler MH
Human molecular genetics (2007) 1620: 2506-16. . **ICC**

Autonomous transposons tune their sequences to ensure somatic suppression.
Ilık İA, Glažar P, Tse K, Brändl B, Meierhofer D, Müller FJ, Smith ZD, Aktaş T
Nature (2024) : . . **WB; tested species: human**

Splicing regulation of GFPT1 muscle-specific isoform and its roles in glucose metabolisms and neuromuscular junction.
Farshadyeganeh P, Nazim M, Zhang R, Ohkawara B, Nakajima K, Rahman MA, Nasrin F, Ito M, Takeda JI, Ohe K, Miyasaka Y, et al.
iScience (2023) 2610: 107746. . **WB; tested species: mouse**

Stimulus-specific remodeling of the neuronal transcriptome through nuclear intron-retaining transcripts.
Mazille M, Buczak K, Scheiffele P, Mauger O
The EMBO journal (2022) : e110192. . **WB; tested species: mouse**

Synergistic assembly of human pre-spliceosomes across introns and exons.
Braun JE, Friedman LJ, Gelles J, Moore MJ
eLife (2018) 7: . . **WB; tested species: human**

Accumulation of nuclear ADAR2 regulates adenosine-to-inosine RNA editing during neuronal development.
Behm M, Wahlstedt H, Widmark A, Eriksson M, Öhman M
Journal of cell science (2017) 1304: 745-753. . **WB; tested species: mouse**

Post-transcriptional Regulation of De Novo Lipogenesis by mTORC1-S6K1-SRPK2 Signaling.
Lee G, Zheng Y, Cho S, Jang C, England C, Dempsey JM, Yu Y, Liu X, He L, Cavaliere PM, Chavez A, et al.
Cell (2017) 1717: 1545-1558.e18. . **WB; tested species: human**

The alternative splicing program of differentiated smooth muscle cells involves concerted non-productive splicing of post-transcriptional regulators.
Llorian M, Gooding C, Bellora N, Hallegger M, Buckroyd A, Wang X, Rajgor D, Kayikci M, Feltham J, Ule J, Eyras E, et al.
Nucleic acids research (2016) 4418: 8933-8950. . **WB**

A 10S galectin-3-U1 snRNP complex assembles into active spliceosomes.
Haudek KC, Voss PG, Wang JL, Patterson RJ
Nucleic acids research (2016) 4413: 6391-7. . **WB**

DNMT1-associated long non-coding RNAs regulate global gene expression and DNA methylation in colon cancer.
Merry CR, Forrest ME, Sabers JN, Beard L, Gao XH, Hatzoglou M, Jackson MW, Wang Z, Markowitz SD, Khalil AM
Human molecular genetics (2015) 2421: 6240-53. . **IP**

Access the online factsheet including applicable protocols at https://sysy.com/product/203011 or scan the QR-code.

FAQ - How should I store my antibody?

Shipping Conditions

- All our antibodies and control proteins / peptides are shipped lyophilized (vacuum freeze-dried) and are stable in this form 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. **They must not be stored in the freezer when still lyophilized!** Temperatures below zero may cause loss of performance.
- **Fluorescence-labeled antibodies** should be reconstituted immediately upon receipt. Long term storage (several months) may lead to aggregation.
- **Control peptides** should be kept at -20°C before reconstitution.

Long Term Storage after Reconstitution (General Considerations)

- The storage freezer must not be of the frost-free variety ("no-frost freezer"). This cycle between freezing and thawing (to reduce frost-build-up), which is exactly what should be avoided. For the same reason, antibody vials should be placed in an area of the freezer that has minimal temperature fluctuations, for instance towards the back rather than on a door shelf.
- Aliquot the antibody and store frozen (-20°C to -80°C). Avoid very small aliquots (below 20 µl) and use the smallest storage vial or tube possible. The smaller the aliquot, the more the stock concentration is affected by evaporation and adsorption of the antibody to the surface of the storage vial or tube. Adsorption of the antibody to the surface leads to a substantial loss of activity.
- The addition of glycerol to a final concentration of 50% lowers the freezing point of your stock and keeps your antibody at -20°C in liquid state. This efficiently avoids freeze and thaw cycles.

Product Specific Hints for Storage

Control proteins / peptides

- Store at -20°C to -80°C.

Monoclonal Antibodies

- **Ascites** and **hybridoma supernatant** should be stored at -20°C up to -80°C. **Prolonged storage at 4°C is not recommended!** Unlike serum, ascites may contain proteases that will degrade the antibodies.
- **Purified IgG** should be stored at -20°C up to -80°C. Adding a carrier protein like BSA will increase long term stability. Many of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Polyclonal Antibodies

- **Crude antisera**: With anti-microbials added, they may be stored at 4°C. However, frozen storage (-20°C up to -80°C) is preferable.
- **Affinity purified antibodies**: Less robust than antisera. Storage at -20°C up to -80°C is recommended. Adding a carrier protein like BSA will increase long term stability. Most of our antibodies already contain carrier proteins. Please refer to the data-sheet for detailed information.

Fluorescence-labeled Antibodies

- Store as a liquid with 1 : 1 (v/v) glycerol at -20°C. Protect these antibodies from light exposure.

Avoid repeated freeze-thaw cycles for all antibodies!

FAQ - How should I reconstitute my antibody?

Reconstitution

- All our purified antibodies are lyophilized from PBS. To reconstitute the antibody in PBS, add the amount of deionized water given in the respective datasheet. If higher volumes are preferred, add water as mentioned above and then the desired amount of PBS and a stabilizing carrier protein (e.g. BSA) to a final concentration of 2%. Some of our antibodies already contain albumin. Take this into account when adding more carrier protein.
  For complete reconstitution, carefully remove the lid. After adding water, briefly vortex the solution. You can spin down the liquid by placing the vial into a 50 ml centrifugation tube filled with paper.
- If desired, add small amounts of azide or thimerosal to prevent microbial growth. This is especially recommended if you want to keep an aliquot a 4°C.
- After reconstitution of fluorescence-labeled antibodies, add 1 : 1 (v/v) glycerol to a final concentration of 50%. This lowers the freezing point of your stock and keeps your antibody in liquid state at -20°C.
- Glycerol may also be added to unlabeled primary antibodies. It is a suitable way to avoid freeze-thaw cycles.
- Please refer to our **tips and hints for subsequent storage** of reconstituted antibodies and control peptides and proteins.