

U1-70k

Rudolf-Wissell-Str. 28 37079 Göttingen, Germany

Phone: +49 551-50556-0 Fax: +49 551-50556-384 E-mail: sales@sysy.com www.sysy.com Web:

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

## **Data Sheet**

Reconstitution/ Storage	100 $\mu g$ purified IgG, lyophilized. For reconstitution add 100 $\mu l$ $H_2O$ to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: 1: 500 up to 1: 1000 (AP staining) IP: yes ICC: 1: 500 IHC: yes IHC-P/FFPE: 1: 500 FACS: yes
Clone	H111
Subtype	IgG1 (κ light chain)
Immunogen	Recombinant protein corresponding to AA 1 to 437 from human U1-70k (UniProt Id: P08621)
Epitop	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.
Specificity	Specific for mammalian U1-70k.

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

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 SYSY Antibodies

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) 13(12): e0209282. FACS; tested species: human

Spatial mapping of splicing factor complexes involved in exon and intron definition.

Ellis JD, Llères D, Denegri M, Lamond AI, Cáceres JF The Journal of cell biology (2008) 181(6): 921-34. IP

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) 16(20): 2506-16. ICC

Heterogeneous nuclear ribonucleoprotein A1 interferes with the binding of the human T cell leukemia virus type 1 rex regulatory protein to its response element.

Dodon MD, Hamaia S, Martin J, Gazzolo L

The Journal of biological chemistry (2002) 277(21): 18744-52. WB

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

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) 171(7): 1545-1558.e18. WB; tested species: human

The alternative splicing program of differentiated smooth muscle cells involves concerted non-productive splicing of posttranscriptional 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) 44(18): 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) 44(13): 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) 24(21): 6240-53. IP

SRSF1 and hnRNP H antagonistically regulate splicing of COLQ exon 16 in a congenital myasthenic syndrome.

Rahman MA, Azuma Y, Nasrin F, Takeda J, Nazim M, Bin Ahsan K, Masuda A, Engel AG, Ohno K

Scientific reports (2015) 5: 13208. WB

A novel intra-U1 snRNP cross-regulation mechanism: alternative splicing switch links U1C and U1-70K expression.

Rösel-Hillgärtner TD, Hung LH, Khrameeva E, Le Querrec P, Gelfand MS, Bindereif A

PLoS genetics (2013) 9(10): e1003856. WB; KD verified; tested species: human

p54(nrb) associates with the 5' splice site within large transcription/splicing complexes.

Kameoka S. Dugue P. Konarska MM

The EMBO journal (2004) 23(8): 1782-91. IP

A general approach for identification of RNA-protein cross-linking sites within native human spliceosomal small nuclear ribonucleoproteins (snRNPs). Analysis of RNA-protein contacts in native U1 and U4/U6.U5 snRNPs.

Urlaub H. Hartmuth K. Kostka S. Grelle G. Lührmann R

The Journal of biological chemistry (2000) 275(52): 41458-68. IP

AU-rich elements target small nuclear RNAs as well as mRNAs for rapid degradation.

Fan XC, Myer VE, Steitz JA

Genes & development (1997) 11(19): 2557-68. IP

Structure of the small nuclear RNP particle U1: identification of the two structural protuberances with RNP-antigens A and 70K. Kastner B, Kornstädt U, Bach M, Lührmann R

The Journal of cell biology (1992) 116(4): 839-49. WB

Detection of a novel ATP-dependent cross-linked protein at the 5' splice site-U1 small nuclear RNA duplex by methylene bluemediated photo-cross-linking.

Liu ZR, Sargueil B, Smith CW

Molecular and cellular biology (1998) 18(12): 6910-20.

Identification of a human protein that recognizes the 3' splice site during the second step of pre-mRNA splicing. Wu S, Green MR

The EMBO journal (1997) 16(14): 4421-32.