SY SY Synaptic Systems

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m3G-cap, m7G-cap

Cat.No. 201 011; Monoclonal mouse antibody, 100 µg purified IgG (lyophilized)

Data Sheet

Reconstitution/ Storage	100 μg purified IgG, lyophilized. For reconstitution add 100 μl H_2O to get a 1mg/ml solution in PBS. Then aliquot and store at -20°C until use.
Applications	WB: not recommended IP: yes (see remarks) ICC: yes (see reference) IHC: not tested yet IHC-P/FFPE: not tested yet ELISA: yes
Clone	H20
Subtype	IgG1 (κ light chain)
Immunogen	Synthetic m ₃ G-cap conjugated to human serum albumin.
Reactivity	Reacts with: human, rat, mouse, eukaryotes. Other species not tested yet.
Specificity	Recognizes m ₃ G-cap and m ⁷ G-cap.
Remarks	This antibody can be used to detect capped RNAs (e.g. in viruses) or to identify and purify proteins associated with capped RNAs (see reference #2).
	IP : Human extracts or extracts from Xenopus laevis. Standard protocol provided with the product.

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

Polymerase II transcripts contain a 5'-terminal **m**⁷**G-cap** that is required for the export of these transcripts from the nucleus to the cytoplasm and eucaryotic translation initiation. The Polymerase II transcribed spliceosomal snRNAs U1, U2, U4 and U5 assemble with the eight Sm proteins B/B', D1, D2, D3, E, F, and G thus forming a core-UsnRNP. The core-UsnRNP is recognized by a methyltransferase that introduces two additional methyl groups to the m⁷G-cap thus forming the **m₃G-cap** (hypermethylation). The m₃G-cap forms one part of the bipartite nuclear localisation signal (NLS) of the UsnRNPs. It is thus necessary for the nuclear re-import of the core-UsnRNPs. Also certain snoRNAs that are involved in the processing of pre-rRNAs contain an m₃G-cap.

Selected References SYSY Antibodies

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