Mouse anti-SAM 2a/b

Product name	**Mouse anti-SAM 2a/b**
Catalog Number	MA00202-50/100
Description	Mouse monoclonal antibody to S- Adenosyl methionine [84-3]
Specificity	Dosage-dependent competition was detected as a sample was added to a cELISA (Any SAM from a sample competes with the coated SAM heptan to bind HRP-conjugated antibody 84-3). The sample is the product of the following biochemical reaction: Methionine Adenosyltransferase (MAT) was added to methionine and adenosine triphosphate under an appropriate buffer at 37°C. It indicates that antibody 84-3 specifically binds physiologically produced SAM.
Cross Reaction	MA00202 shows the following reactivity with related compounds: S-Adenosylmethionine: 100%, S-Adenosylhomocysteine: < 1%, Adenosine: < 1%, L-Methionine: < 1%, Methythioadenosine (MTA) : < 1%, ADP (adenosine diphosphate) < 1%, ATP (adenosine triphosphate) < 1%
Immunogen	S-Adenosylmethionine analog conjugated to KLH

Properties

Form	Liquid
Storage instructions	Store at 4°C, -20°C for long term storage
Storage buffer	PBS 10mM pH7.4 (NaCl 150mM), Sodium azide 0.02%, BSA 10mg/ml or PBS 10mM pH7.4 (NaCl 150mM), Sodium azide 0.02%, Glycerol 50%, BSA 10mg/ml
Purity	>95% Purified from mouse ascites fluid by affinity chromatography
Clonality	Monoclonal
Clone number	84-3
Immunoglobin isotype	IgG2b
Affinity	Ka = 7.29 x 10^{10}L/mol (1.37 x 10^{-11}M)
Research Areas	Methylation of biomolecules (DNA, RNA, proteins, hormones, neurotransmitters, etc.) One-carbon metabolism Signal Transduction Metabolism Pathways and Processes Cancers Arthritis Heart diseases Neurodegenerative diseases Atherosclerosis Liver diseases Kidney diseases

Applications

The use of MA00202 in the following tested applications has been tested.

The application notes include recommended starting dilutions. Optimal dilutions/concentrations should be determined by the end user. Higher dilution than suggested maybe used in IHC and IF. The product may be used in other not-yet-tested applications.

Application	Notes
cELISA	1:10000-1:30000
FCM	1:200/400
IHC	1:200/400

Target

S- Adenosylmethionine is a common co-substrate involved in methyl group transfers. It is made from adenosine triphosphate (ATP) and methionine by methionine adenosyltransferase.Transmethylation, transsulfuration, and aminopropylation are the metabolic pathways that use SAM.Although these anabolic reactions occur throughout the body, most SAM is produced and consumed in the liver.

Cellular localization

Cytoplasm, nuclear

For Research Use Only.

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE.
T: +44 (0) 1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141.
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Europe
Berenkoog 41,
1822 BH Alkmaar,
Netherlands
T: +31 (0)72 8080244
F: +31 (0)72 8080142

Switzerland
Via Lisano 3,
(CP.683)
CH-6900
T: +41 (0) 91 604 55 22
F: +41 (0) 91 605 17 85

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880

Anti–Adenosylmethionine antibody [84–3]

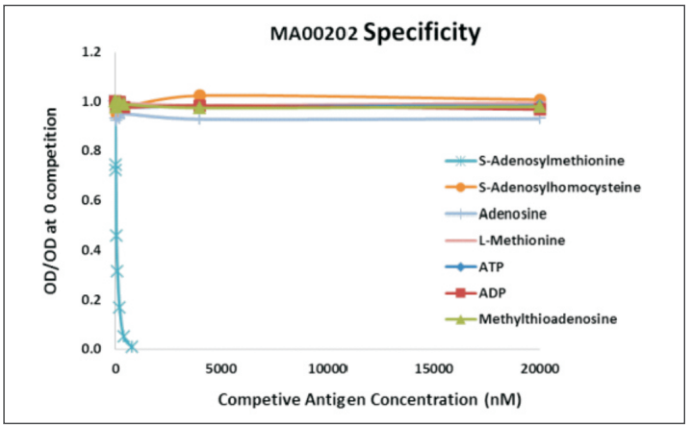


Figure 1 Competitive ELISA with anti-S-Adenosymethionine monoclonal antibody [84-3] (MA00202)

The 0.1 µg/ml of SAM coating standard (Cat # ACT00201) was coated into 96 wells. Serial dilution of SAM standard (Cat # AST00201), S-Adenosylhomocysteine (SAH), Adenosine (Ade), L-Methionine (Met), Methythioadenosine (MTA), Adenosine diphosphate (ADP), Adenosine triphosphate (ATP) and 1:35000 of MA00202 were added.HRP conjugated Goat anti-Mouse IgG antibody was used to develop the color. The A is the OD450 value of the test well and the A0 is the OD450 of the well without competitive antigen.

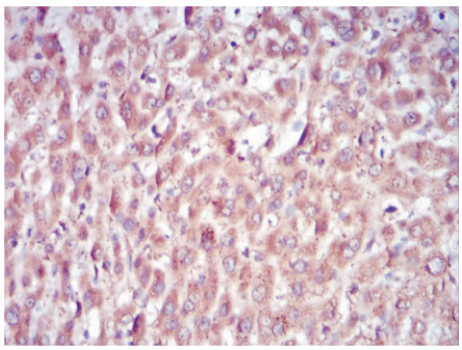


Figure 2 Immunohistochemistry staining performed using MA00202 with benign liver tissue adjacent to carcinoma. Brown areas indicated strong positive staining in cytoplasm (X400).

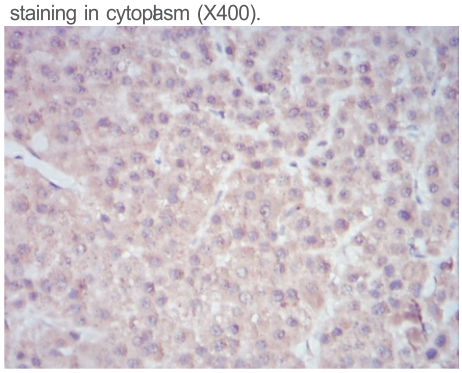
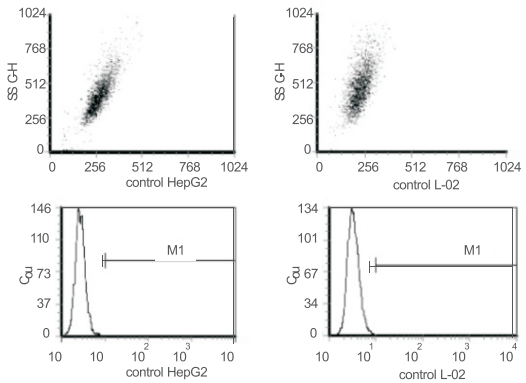


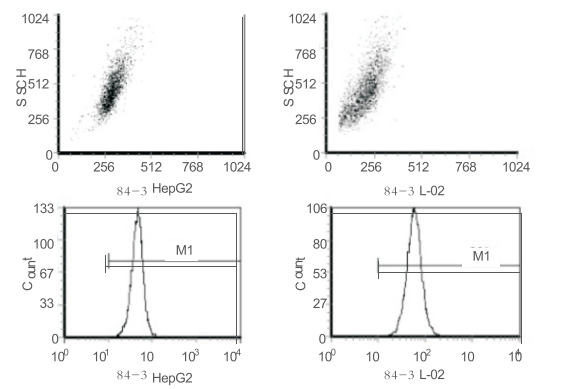
Figure 3 The immunohistochemical statining is performed for the same sample as in Figure 2 with liver cancer tissue.Cytoplasm showed background staining (further dilution beyond 1:200 is required) with Ma00202 (X400).



Marker	Low bound	High bound	# of Events	# of gated cells	Geometric Mean
ALL	1	10000	10000	100.0	2.72
M1	10	10000	17	0.17	48.98

Marker	Low bound	High bound	# of Events	# of gated cells	Geometric Mean
ALL	1	10000	10000	100.0	3.33
M1	10	10000	44	0.44	17.12

Figure 4 FCM analysis control.Normal liver cells L02 and carcinoma cells Hep G2 were stained with the buffer without any antibody.



Marker	Low bound	High bound	# of Events	# of gated cells	Geometric Mean
ALL	1	10000	10000	100.0	248.84
M1	10	10000	9993	99.93	249.65

Marker	Low bound	High bound	# of Events	# of gated cells	Geometric Mean
ALL		10000	10000	100.0	299.31
M1	10	10000	9992	99.92	300.38

Figure 5 FCM results from normal liver cell line L02 and hepatocyte carcinoma cell line Hep G2 stained with anti-SAM monoclonal antibody from clone 84-3.Average fluorescence signal in Hep G2 cells was reduced compared to that in L02 cells, indicating SAM level is reduced during carcinogenesis.

For Research Use Only.

AMSBIO | www.amsbio.com | info@amsbio.com

UK & Rest of the World
184 Park Drive, Milton Park
Abingdon OX14 4SE.
T: +44 (0) 1235 828 200
F: +44 (0) 1235 820 482

North America
1035 Cambridge Street,
Cambridge, MA 02141.
T: +1 (617) 945-5033 or
T: +1 (800) 987-0985
F: +1 (617) 945-8218

Europe
Berenkoog 41,
1822 BH Alkmaar,
Netherlands
T: +31 (0)72 8080244
F: +31 (0)72 8080142

Switzerland
Via Lisano 3,
(CP.683)
CH-6900
T: +41 (0) 91 604 55 22
F: +41 (0) 91 605 17 85

Germany
Bockenheimer Landstr. 17/19
60325 Frankfurt/Main
T: +49 (0) 69 779099
F: +49 (0) 69 13376880