EAGLE
BIOSCIENCES

Mouse monoclonal antibody to S-Adenosylmethionine (Clone 118-18)

Catalog Number:

SAM88-A50 50µl

For Research Use Only. Not for use in diagnostic procedures.

v. 1.0

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Properties

- **Form:** Liquid
- **Storage instructions:** Store at 4°C, -20°C for long term storage
- **Storage buffer:** PBS 10mM pH 7.4 (NaCl 150mM), Sodium azide 0.02%, BSA 10mg/ml or PBS 10mM pH 7.4 (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**: 118-18
- **Immunoglobin isotype**: IgG2b
- **Affinity:** Ka = 7.68 x 10^{9} L/mol (1.30 x 10^{-10}M)
- **Specificity:** Shows the following reactivities with related compounds: S-Adenosylmethionine: 100%, S-Adenosylhomocysteine: <1%, Adenosine: <1%, LMethionine: <1%.
- **Immunogen:** S- Adenosylmethionine analog conjugated to KLH

Applications

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	1:4000-1:10000
FCM	1: 400
IHC	1:400

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

Anti-Adenosylmethionine antibody [118-18]

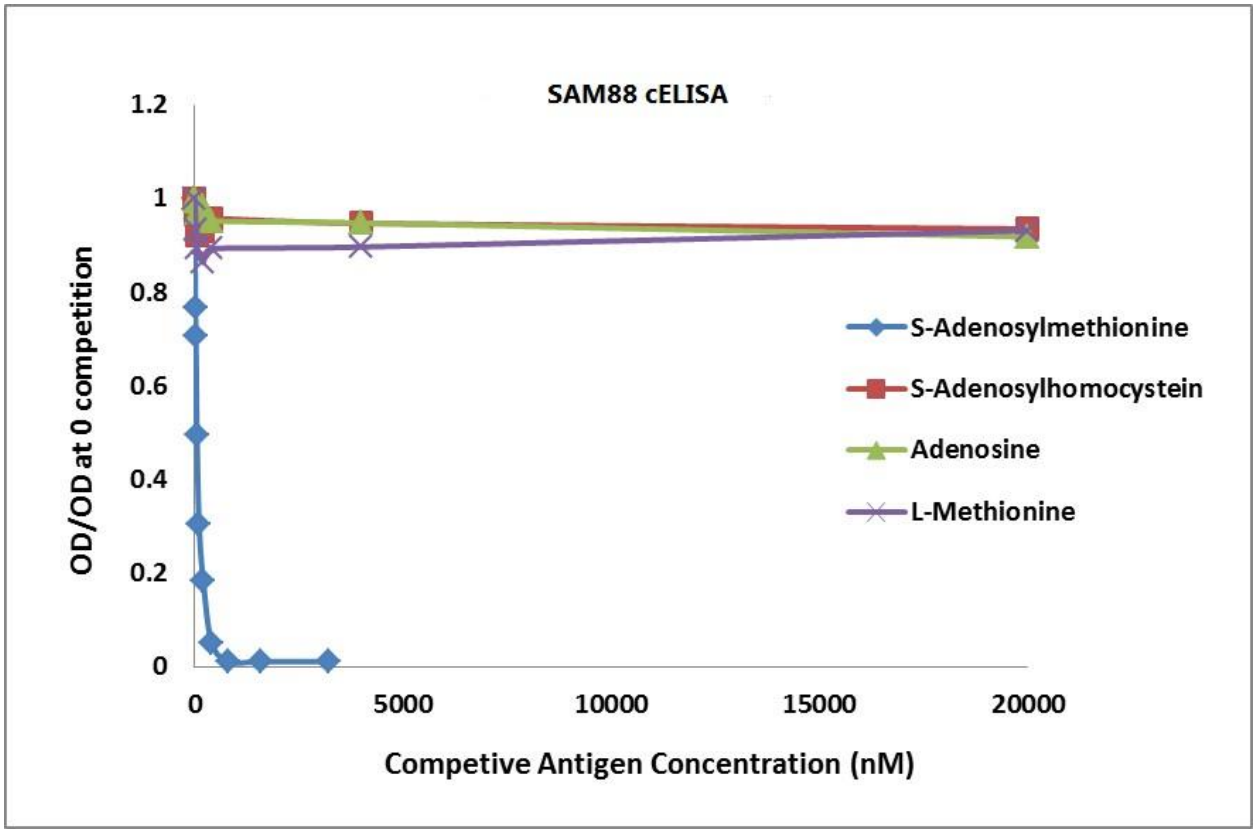


Figure 1 Competitive ELISA using anti-S-Adenosymethionine monoclonal antibody [118-18]

The 0.1 µg/ml of SAM coating standard was coated into 96 wells. Serial dilution of SAM standard, S-Adenosylhomocysteine(SAH), Adenosine, L-Methionine and 1:15000 of the antibody 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.

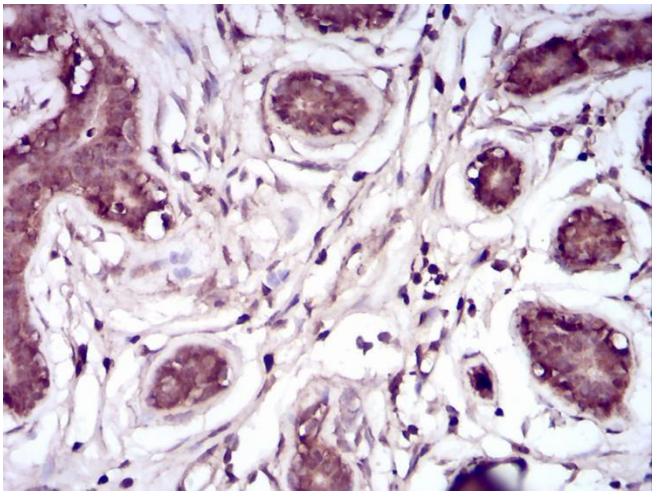


Figure 2. Immunohistochemistry staining was performed using the antibody with benign breast tissue adjacent to carcinoma. Brown areas indicated strong positive staining in nuclear and cytoplasmic areas.

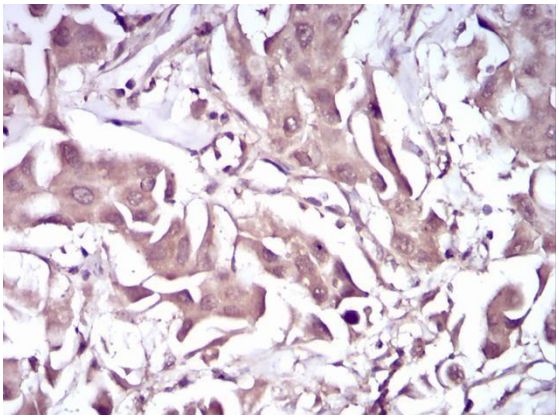
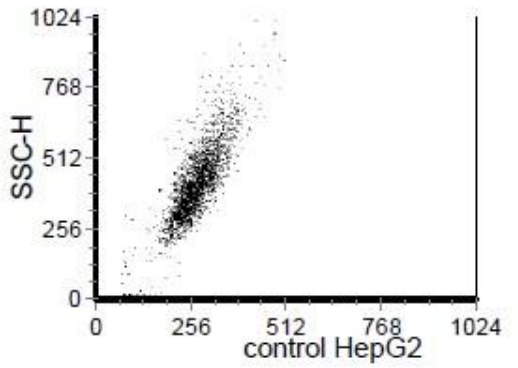
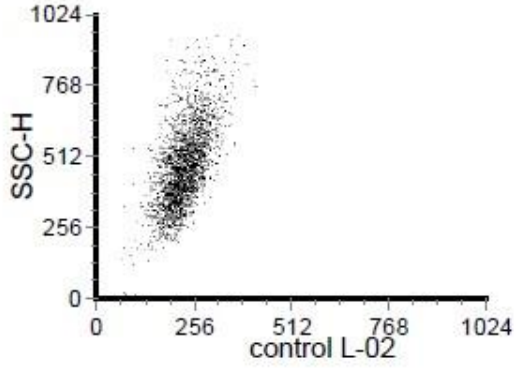
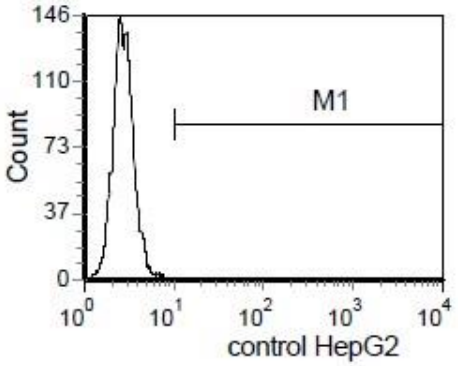
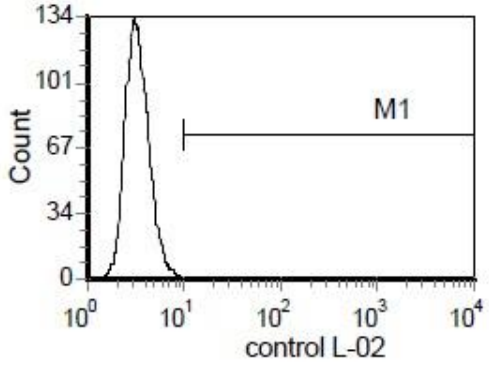


Figure 3. The same samples as in Figure 2 from breast cancer area. Cytoplasmic and nuclear areas showed negative or much weak or background staining.





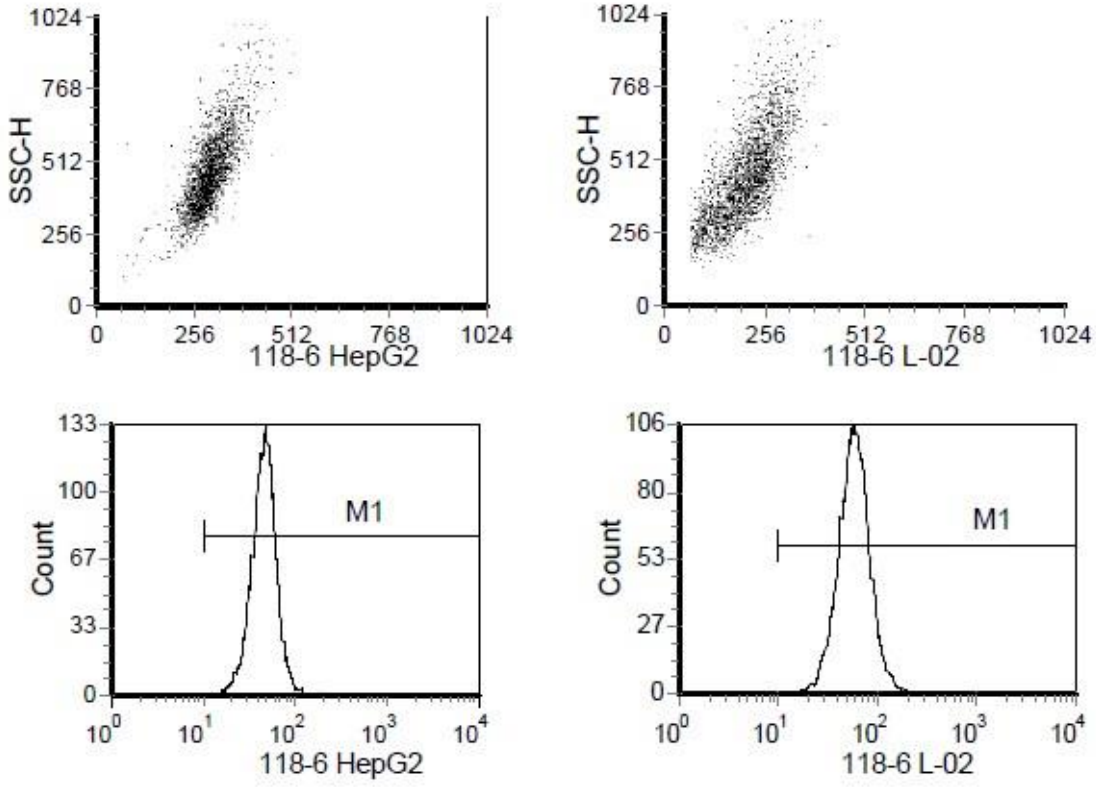




Marker	Low bound	High bound	# of Events	% of gated cells	Geometric Mean
ALL	1	10000	10000	100.0	2.72
M1	10	10000	17	0.17	48.98

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	45.34
M1	10	10000	9979	99.79	45.55

Marker	Low bound	High bound	# of Events	% of gated cells	Geometric Mean
ALL	1	10000	10000	100.0	58.22
M1	10	10000	9992	99.92	58.34

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 118-18. Average fluorescence signal in Hep G2 cells was reduced compared to that in L02 cells, indicating SAM level is reduced during carcinogenesis.

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