

# Anti-BHMT [3E7]

**Catalogue number:** 152637

**Sub-type:** Primary antibody

**Images:**

## Contributor

**Inventor:**

**Institute:** A\*STAR Accelerate Technologies Pte Ltd

**Images:**

## Tool details

**\*FOR RESEARCH USE ONLY**

**Name:** Anti-BHMT [3E7]

**Alternate name:**

**Class:** Monoclonal

**Conjugate:** Unconjugated

**Description:** Betaine homocysteine S-methyltransferase (BHMT) shares 61% sequence homology between human and mouse gene. This 406 amino acids protein is found in both eukaryotes and prokaryotes. Homocysteine is generated from S-adenosylhomocysteine (SAH) through S-adenosylhomocysteine hydrolase (SAHH) catalyzed reaction, into homocysteine and adenosine. This reversible reaction is thermodynamically favoured in the reverse reaction, synthesizing SAH. Therefore, to prevent the reverse reaction, adenosine is metabolized by adenosine deaminase and homocysteine is metabolized through several means of which BHMT is one of them. The action of BHMT is to catalyze resynthesis of methionine using homocysteine and methyl donor betaine. Betaine could be obtained from diet and in mammalian cells, it can be produced by choline oxidation in liver and kidney. Studies in many animal models revealed that liver and kidney are main organs for BHMT. BHMT presence is also detected in lens as well as in hepatocyte membrane, which thus lends speculations about other possible physiological roles besides methionine synthesis. Therefore, much studies have to be undertaken, to understanding the other physiological roles, if any, of BHMT besides the traditional role in methylation in future.

**Purpose:**

**Parental cell:**

**Organism:**

**Tissue:**

**Model:**

**Gender:**

**Isotype:** IgG1

**Reactivity:**

Zebrafish

**Selectivity:**

**Host:** Mouse

**Immunogen:** GST-BHMT fusion protein

**Immunogen UNIPROT ID:**

**Sequence:**

**Growth properties:**

**Production details:**

**Formulation:**

**Recommended controls:** Zebrafish embryo lysate

**Bacterial resistance:**

**Selectable markers:**

**Additional notes:**

## Target details

**Target:** Betaine homocysteine S-methyltransferase

**Target alternate names:**

**Target background:** Betaine homocysteine S-methyltransferase (BHMT) shares 61% sequence homology between human and mouse gene. This 406 amino acids protein is found in both eukaryotes and prokaryotes. Homocysteine is generated from S-adenosylhomocysteine (SAH) through S-adenosylhomocysteine hydrolase (SAHH) catalyzed reaction, into homocysteine and adenosine. This reversible reaction is thermodynamically favoured in the reverse reaction, synthesizing SAH. Therefore, to prevent the reverse reaction, adenosine is metabolized by adenosine deaminase and homocysteine is metabolized through several means of which BHMT is one of them. The action of BHMT is to catalyze resynthesis of methionine using homocysteine and methyl donor betaine. Betaine could be obtained from diet and in mammalian cells, it can be produced by choline oxidation in liver and kidney. Studies in many animal models revealed that liver and kidney are main organs for BHMT. BHMT presence is also detected in lens as well as in hepatocyte membrane, which thus lends speculations about other possible physiological roles besides methionine synthesis. Therefore, much studies have to be undertaken, to understanding the other physiological roles, if any, of BHMT besides the traditional role in methylation in future.

**Molecular weight:**

**Ic50:**

## Applications

**Application:** FACS ; WB

**Application notes:**

## Handling

**Format:** Liquid

**Concentration:**

**Passage number:**

**Growth medium:**

**Temperature:**

**Atmosphere:**

**Volume:**

**Storage medium:**

**Storage buffer:**

**Storage conditions:**

**Shipping conditions:** Shipping at 4° C

## Related tools

**Related tools:**

## References

**References:**

CancerTools.org