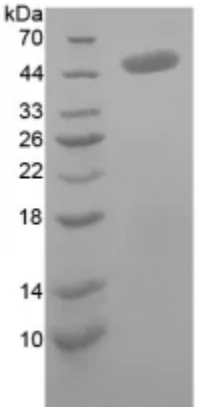
Active Adenosylhomocysteinase (AHCY)

Catalog#:PXH12961

概述（Summary）

别称（Alternative Names）	SAHH; AdoHcyase; S-Adenosylhomocysteine Hydrolase; S-adenosyl-L-homocysteine hydrolase
纯度（Purity）	Greater than 95% as determined by reducing SDS-PAGE.
内毒素（Endotoxin level）	Please contact with the lab for this information
蛋白构建（Construction）	【Ser2-Tyr432】
Accession #	P23526
表达宿主（Host）	-
种属（Species）	Homo sapiens (Human)
预测分子量（Predicted MW）	51.3 kDa
制剂（Form）	Lyophilized from a 0.2 μm filtered solution of 20mM Tris, 150mM NaCl, pH8.0, containing 1mM EDTA, 1mM DTT, 0.01% SKL, 5% Trehalose and Proclin300.
运输方式（Shipping）	The product is shipped with ice bag. Upon receipt, store it immediately at the temperature listed below.
稳定性&储存（Stability &Storage）	12 months at -20°C to -80°C in lyophilized state.6 months at -20°C to -80°C under sterile conditions after reconstitution.7-10 days at 2°C to 8°C under sterile conditions after reconstitution.Please minimize freeze-thaw cycles.
复溶（Reconstitution）	Reconstitute in 10mM PBS (pH7.4) to a concentration of 0.1-1.0 mg/mL. Do not vortex.
背景介绍（References）	Adenosylhomocysteine is a competitive inhibitor of S-adenosyl-L-methionine-dependent methyl transferase reactions; therefore adenosylhomocysteinase may play a key role in the control of methylations via regulation of the intracellular concentration of adenosylhomocysteine.

电泳图（SDS-PAGE image）



Greater than 95% as determined by reducing SDS-PAGE.

活性图（Bioactivity image）

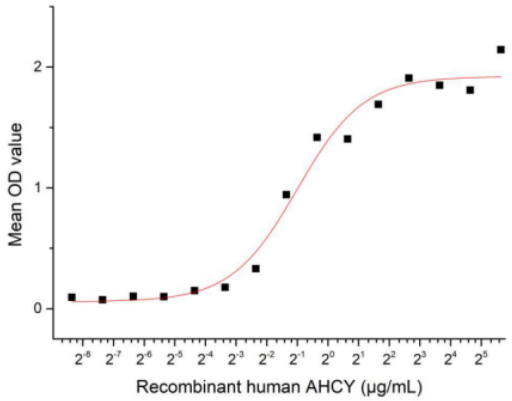


Figure 1. The binding activity of recombinant human AHCY and mouse DNMT3B

Adenosylhomocysteinase (AHCY) is a conserved enzyme governing one-carbon metabolism, catalysing reversible hydrolysis of S-adenosyl-L-homocysteine into adenosine and L-homocysteine. As the sole mammalian enzyme clearing S-adenosylhomocysteine, a potent methyltransferase inhibitor, AHCY maintains cellular methylation homeostasis. Its activity shapes DNA, RNA and histone methylation landscapes, regulating cell proliferation, differentiation and epigenetic reprogramming. Dysregulated AHCY expression occurs in multiple malignancies, driving aberrant epigenetic signalling and tumour progression. It participates in intricate epigenetic regulatory networks and interacts with various methyltransferases to coordinate transmethylation reactions essential for normal physiological function. AHCY directly binds DNMT3B to modulate de novo DNA methyltransferase activity and fine-tune genomic DNA methylation levels. Thus a functional ELISA assay was conducted to detect the interaction of recombinant human AHCY and recombinant mouse DNMT3B. Briefly, AHCY was diluted serially in PBS with 0.01% BSA (pH 7.4). Duplicate samples of 100 µL were then transferred to DNMT3B-coated microtiter wells and incubated for 1h at 37℃. Wells were washed with PBST and incubated for 1h with anti-AHCY pAb, then aspirated and washed 3 times. After incubation with HRP labelled secondary antibody for 1h at 37℃, wells were aspirated and washed 5 times. With the addition of substrate solution, wells were incubated 15-25 minutes at 37℃. Finally, add 50 µL stop solution to the wells and read at 450/630nm immediately. The binding activity of recombinant human AHCY and recombinan mouset DNMT3B was shown in Figure 1, the EC50 for this effect is 0.500 µg/mL.

注意事项（Note）

For Research Use Only , Not for Diagnostic Use.