abcam

Product datasheet

Anti-Cystathionase/CTH antibody [2E12-1C10] ab54573

11 References 4 Images

Overview

Product name	Anti-Cystathionase/CTH antibody [2E12-1C10]
Description	Mouse monoclonal [2E12-1C10] to Cystathionase/CTH
Host species	Mouse
Tested applications	**Suitable for:** WB, IHC-P, ICC/IF, Flow Cyt
Species reactivity	**Reacts with:** Human
Immunogen	Recombinant full length protein corresponding to Human Cystathionase/CTH aa 1-406.
General notes	This product was changed from ascites to tissue culture supernatant on 12/3/19. Please note that the dilutions may need to be adjusted accordingly. If you have any questions, please do not hesitate to contact our scientific support team. The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing. If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Upon delivery aliquot and store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.
Storage buffer	pH: 7.4
Purity	Tissue culture supernatant
Clonality	Monoclonal
Clone number	2E12-1C10
Isotype	IgG1
Light chain type	kappa

Applications

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab54573 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB		Use at an assay dependent concentration. Predicted molecular weight: 45 kDa.
IHC-P		Use at an assay dependent concentration.
ICC/IF		Use at an assay dependent concentration.
Flow Cyt		Use at an assay dependent concentration. **ab170190** - Mouse monoclonal IgG1, is suitable for use as an isotype control with this antibody.

Target

Function Catalyzes the last step in the transsulfuration pathway from methionine to cysteine. Has broad substrate specificity. Converts cystathionine to cysteine, ammonia and 2-oxobutanoate. Converts two cysteine molecules to lanthionine and hydrogen sulfide. Can also accept homocysteine as substrate. Specificity depends on the levels of the endogenous substrates. Generates the endogenous signaling molecule hydrogen sulfide (H2S), and so contributes to the regulation of blood pressure.

Pathway Amino-acid biosynthesis; L-cysteine biosynthesis; L-cysteine from L-homocysteine and L-serine: step 2/2.

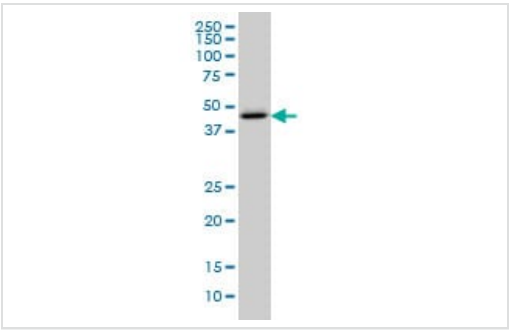
Involvement in disease Defects in CTH are the cause of cystathioninuria (CSTNU) [MIM:219500]. It is an autosomal recessive phenotype characterized by abnormal accumulation of plasma cystathionine, leading to increased urinary excretion.

Sequence similarities Belongs to the trans-sulfuration enzymes family.

Post-translational modifications Phosphorylated upon DNA damage, probably by ATM or ATR.

Cellular localization Cytoplasm.

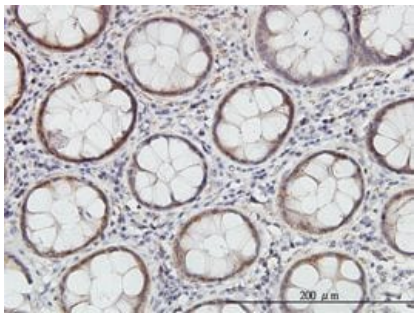
Images



Western blot - Anti-Cystathionase/CTH antibody [2E12-1C10] (ab54573)

Cystathionase/CTH antibody (ab54573) at 1ug/lane + K-562 cell lysate at 25ug/lane.

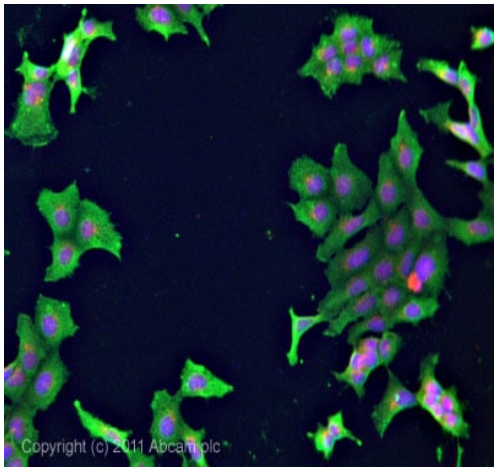
This image was generated using the ascites version of the product.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Cystathionase/CTH antibody [2E12-1C10] (ab54573)

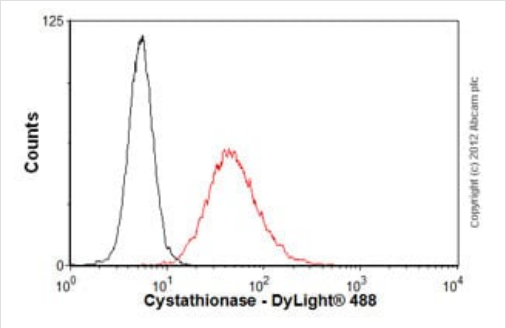
Cystathionase/CTH antibody (ab54573) used in immunohistochemistry at 3ug/ml on formalin fixed and paraffin embedded human colon.

This image was generated using the ascites version of the product.



Immunocytochemistry/ Immunofluorescence - Anti-Cystathionase/CTH antibody [2E12-1C10] (ab54573)

ICC/IF image of ab54573 stained MCF7 cells. The cells were 4% formaldehyde fixed (10 min) and then incubated in 1%BSA / 10% normal goat serum / 0.3M glycine in 0.1% PBS-Tween for 1h to permeabilise the cells and block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab54573, 5µg/ml) overnight at +4°C. The secondary antibody (green) was **ab96879**, DyLight® 488 goat anti-mouse IgG (H+L) used at a 1/250 dilution for 1h. Alexa Fluor® 594 WGA was used to label plasma membranes (red) at a 1/200 dilution for 1h. DAPI was used to stain the cell nuclei (blue) at a concentration of 1.43µM.
This image was generated using the ascites version of the product.



Flow Cytometry - Anti-Cystathionase/CTH antibody [2E12-1C10] (ab54573)

Overlay histogram showing K562 cells stained with ab54573 (red line). The cells were fixed with 4% paraformaldehyde (10 min) and then permeabilized with 0.1% PBS-Tween for 20 min. The cells were then incubated in 1x PBS / 10% normal goat serum / 0.3M glycine to block non-specific protein-protein interactions. The cells were then incubated with the antibody (ab54573, 1µg/1x10^6 cells) for 30 min at 22ºC. The secondary antibody used was DyLight® 488 goat anti-mouse IgG (H+L) (**ab96879**) at 1/500 dilution for 30 min at 22ºC. Isotype control antibody (black line) was mouse IgG1 [ICIGG1] (**ab91353**, 2µg/1x10^6 cells) used under the same conditions. Acquisition of >5,000 events was performed. This antibody gave a positive signal in K562 cells fixed with 80% methanol (5 min)/permeabilized with 0.1% PBS-Tween for 20 min used under the same conditions.

This image was generated using the ascites version of the product.

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