




Product datasheet

Anti-P5CS antibody ab223713

7 Images

Overview

Product name	Anti-P5CS antibody
Description	Rabbit polyclonal to P5CS
Host species	Rabbit
Tested applications	Suitable for: WB, IHC-P, ICC/IF
Species reactivity	Reacts with: Mouse, Rat, Human Predicted to work with: Orangutan 
Immunogen	Recombinant fragment corresponding to Human P5CS aa 50-250. Database link: P54886  Run BLAST with  Run BLAST with
Positive control	WB: NIH/3T3, NBT-II and U-251 cell lysates. IHC-P: Human colon, testis and cerebral cortex tissue. ICC/IF: U-2 OS cells.
General notes	<p>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.</p> <p>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</p>

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.20 Preservative: 0.02% Sodium azide Constituents: 40% Glycerol (glycerin, glycerine), PBS
Purity	Immunogen affinity purified
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee

Our **Abpromise guarantee** covers the use of ab223713 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 a concentration of 0.04 - 0.4 µg/ml. Predicted molecular weight: 87 kDa.
IHC-P		1/20 - 1/50. Perform heat mediated antigen retrieval with citrate buffer pH 6 before commencing with IHC staining protocol.
ICC/IF		Use a concentration of 0.25 - 2 µg/ml. Fixation/Permeabilization: PFA/Triton X-100.

Target

Pathway

Amino-acid biosynthesis; L-proline biosynthesis; L-glutamate 5-semialdehyde from L-glutamate: step 1/2.

Amino-acid biosynthesis; L-proline biosynthesis; L-glutamate 5-semialdehyde from L-glutamate: step 2/2.

Involvement in disease

Defects in ALDH18A1 are the cause of mental retardation-joint hypermobility-skin laxity with or without metabolic abnormalities (MRJHSL) [MIM:612652]. Clinical manifestations include microcephaly, progressive neurologic dysfunction, mental retardation, progeroid appearance, joint hypermobility, skin laxity and hyperelasticity, cataracts. Some patients manifest metabolic disturbances such as hyperammonemia, hypomethioninemia, hypocitrullinemia, hypoargininemia and hypoprolinemia.

Sequence similarities

In the N-terminal section; belongs to the glutamate 5-kinase family.

In the C-terminal section; belongs to the gamma-glutamyl phosphate reductase family.

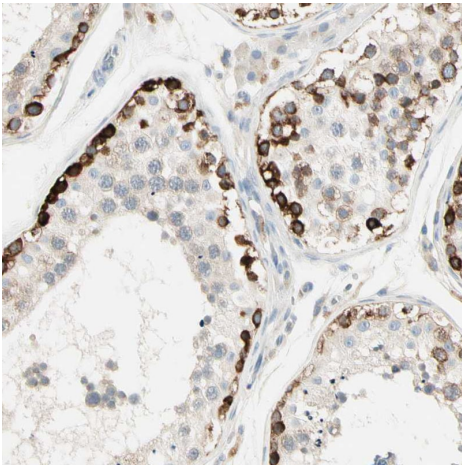
Cellular localization

Mitochondrion inner membrane.

Form

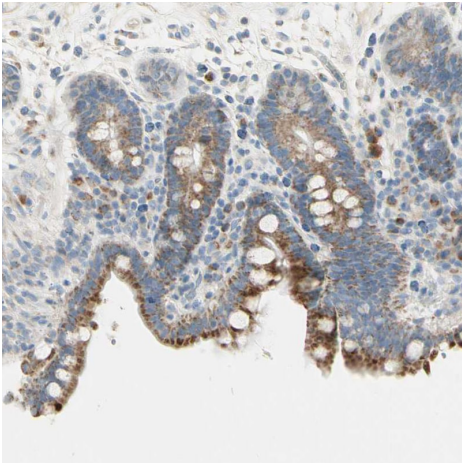
P5CS catalyzes the ATP- and NADPH-dependent conversion of L-glutamate to glutamic gamma-semialdehyde, which is the metabolic precursor for proline biosynthesis. There are 2 isoforms produced by alternative splicing.

Images



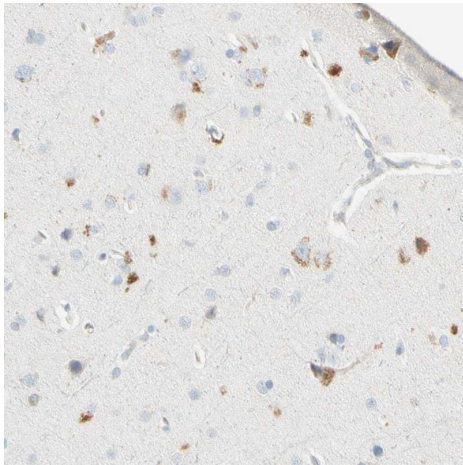
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P5CS antibody (ab223713)

Paraffin embedded sections of human testis were stained for P5CS with ab223713 at 1/20 dilution in immunohistochemical analysis.



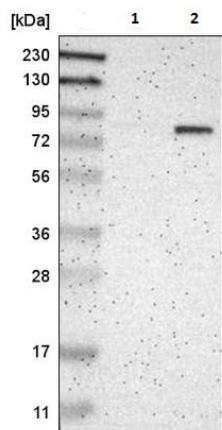
Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P5CS antibody (ab223713)

Paraffin embedded sections of human colon were stained for P5CS with ab223713 at 1/20 dilution in immunohistochemical analysis.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-P5CS antibody (ab223713)

Paraffin embedded sections of human cerebral cortex were stained for P5CS with ab223713 at 1/20 dilution in immunohistochemical analysis.



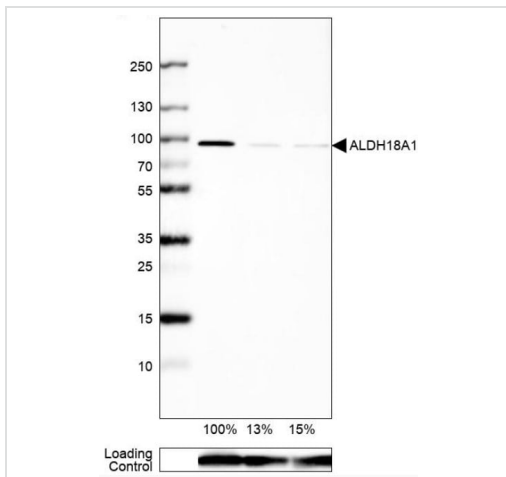
Western blot - Anti-P5CS antibody (ab223713)

All lanes : Anti-P5CS antibody (ab223713) at 1/100 dilution

Lane 1 : RT4 (human urinary bladder cancer cell line) cell lysate

Lane 2 : U-251 MG (human brain glioma cell line) cell lysate

Predicted band size: 87 kDa



Western blot - Anti-P5CS antibody (ab223713)

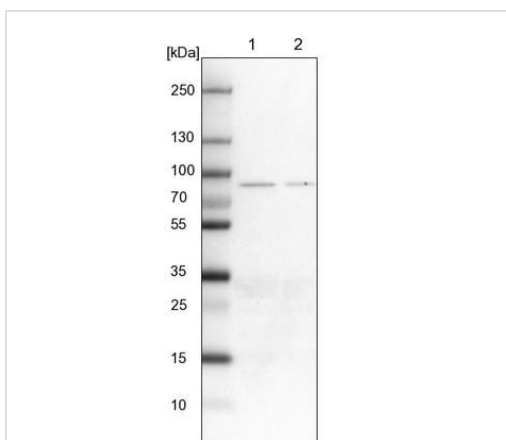
All lanes : Anti-P5CS antibody (ab223713) at 1/20 dilution

Lane 1 : Caco-2 cell lysate transfected with control siRNA

Lane 2 : Caco-2 cell lysate transfected with target specific siRNA probe #1

Lane 3 : Caco-2 cell lysate transfected with target specific siRNA probe #2

Predicted band size: 87 kDa



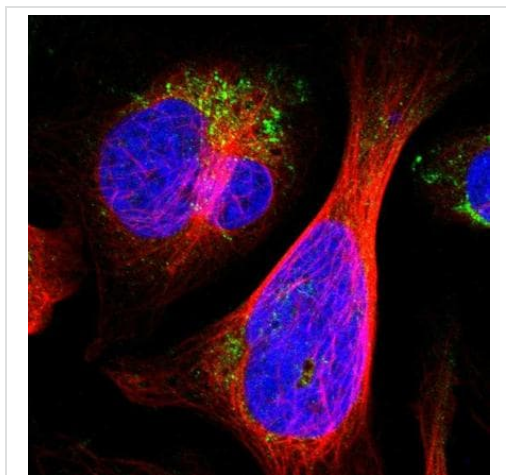
Western blot - Anti-P5CS antibody (ab223713)

All lanes : Anti-P5CS antibody (ab223713) at 1/100 dilution

Lane 1 : NIH/3T3 (mouse embryo fibroblast cell line) cell lysate

Lane 2 : NBT-II (rat bladder tumor cell line) cell lysate

Predicted band size: 87 kDa



Immunocytochemistry/ Immunofluorescence - Anti-P5CS antibody (ab223713)

PFA-fixed, Triton X-100 permeabilized U-2 OS (human bone osteosarcoma epithelial cell line) cells stained for P5CS (green) using ab223713 at 4 µg/ml in ICC/IF.

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