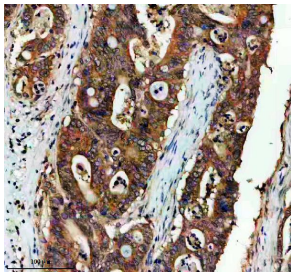
ADSL Antibody / Adenylosuccinate lyase Antibody (FY13560)

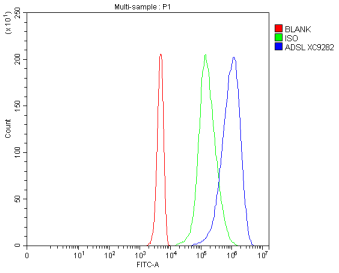
Catalog No.	Formulation	Size
FY13560	0.5mg/ml if reconstituted with 0.2ml sterile DI water	100 ug

Bulk quote request

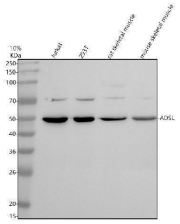
Species Reactivity	Human, Mouse, Rat
Format	Antigen affinity purified
Host	Rabbit
Clonality	Polyclonal (rabbit origin)
Isotype	Rabbit Ig
Buffer	Each vial contains 4 mg Trehalose, 0.9 mg NaCl, 0.2 mg Na2HPO4.
UniProt	P30566
Applications	Western blot: 0.5-1ug/ml Immunohistochemistry (FFPE): 2-5ug/ml Flow cytometry: 1-3ug/million cells
Limitations	This ADSL Antibody / Adenylosuccinate lyase Antibody is supplied exclusively for research use.



ADSL Antibody by IHC in human colon carcinoma. Immunohistochemistry of formalin-fixed, paraffin-embedded human colon carcinoma using Adenylosuccinate lyase Antibody reveals strong brown immunoreactivity in tumor epithelial cells, predominantly in the cytoplasmic compartment. Blue hematoxylin counterstaining delineates nuclei and surrounding stromal cells. Heat-mediated antigen retrieval was performed in EDTA buffer at pH 8.0, followed by blocking with 10% goat serum. Sections were incubated with primary antibody at 2 ug/mL overnight at 4oC. Immunoreactivity was visualized using an HRP-conjugated secondary antibody and DAB chromogen.



ADSL Antibody by FACS in human 293T cells. Intracellular flow cytometry using Adenylosuccinate lyase Antibody demonstrates a rightward fluorescence shift in fixed and permeabilized 293T cells compared with rabbit IgG isotype control. The antibody-labeled population is shown in blue, isotype control in green, and unstained blank control in red. Cells were fixed with 4% paraformaldehyde, permeabilized, blocked with 10% normal goat serum, and incubated with 1 ug primary antibody per 1 x 10^6 cells for 30 minutes at 20oC. Fluorescent secondary antibody was used for detection.



ADSL Antibody by WB in human and rodent lysates. Western blot analysis using Adenylosuccinate lyase Antibody detects a prominent band near 50 kDa in human Jurkat (lane 1) and 293T (lane 2) cell lysates, rat skeletal muscle (lane 3), and mouse skeletal muscle (lane 4). The observed migration agrees with the approximately 50 kDa calculated molecular weight of ADSL. Reduced lysates containing 30 ug protein per lane were resolved by 10% SDS-PAGE and transferred to nitrocellulose. Following blocking with 5% nonfat milk, membranes were incubated with primary antibody at 0.5 ug/mL overnight at 4oC and developed using HRP-conjugated secondary antibody and chemiluminescence.

Description

ADSL Antibody / Adenylosuccinate lyase Antibody detects ADSL, an enzyme that catalyzes two distinct reactions in purine nucleotide metabolism. In de novo purine synthesis, it converts succinylaminoimidazolecarboxamide ribotide (SAICAR) to aminoimidazolecarboxamide ribotide (AICAR). It also converts adenylosuccinate to AMP in a reaction that participates in purine synthesis and the purine nucleotide cycle. Both reactions release fumarate.

Purine nucleotides are required for nucleic acid synthesis, energy transfer, and numerous regulatory processes. ADSL therefore sits at an important metabolic intersection, helping maintain the supply and balance of adenine-containing nucleotides. Its enzymatic activity depends on the proper assembly and structure of the protein, and loss of function can affect both of its catalytic reactions.

Inherited ADSL deficiency is a rare metabolic disorder associated with neurological and developmental abnormalities. A characteristic biochemical feature is the accumulation of succinylpurines, including succinyladenosine and SAICAr, which arise when the normal ADSL-catalyzed steps are impaired. The clinical manifestations vary widely, and the relative contributions of nucleotide imbalance and accumulated metabolites remain areas of investigation.

Because ADSL participates in more than one metabolic reaction, its biological significance cannot be reduced to a single substrate-product pair. Cellular consequences may involve altered purine availability, accumulation of intermediates, and changes in metabolic regulation. NSJ Bioreagents provides the ADSL Antibody for work related to adenylosuccinate lyase and purine metabolism. An ADSL Antibody can help investigate the molecular basis of nucleotide synthesis and the consequences of impaired purine-pathway activity.

Explore related research targets in our Metabolism Antibody / Metabolism Antibodies collection.

Application Notes

Working dilutions of the ADSL Antibody / Adenylosuccinate lyase Antibody may require optimization according to the experimental protocol.

Immunogen

The ADSL Antibody was generated using a synthetic peptide corresponding to a sequence at the N-terminus of human ADSL.

Storage

Once reconstituted, refrigerate the ADSL Antibody at 4oC for no longer than one month. For extended storage, freeze aliquots at -20oC for up to six months and avoid repeated freeze-thaw cycles.

Alternate Names

ADSL antibody, Adenylosuccinate lyase antibody, AMPS antibody, ASASE antibody, ASL antibody, EC:4.3.2.2 antibody

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