Glutamine synthetase

Polyclonal ANTIBODY

Catalog Number: 11037-2-AP

Basic Information

Catalog Number: 11037-2-AP
Size: 25 µg/150 µl
Source: Rabbit
Isotype: IgG
Purification Method: Antigen affinity purification
Immunogen Catalog Number: AG1510

GenBank Accession Number: BCD11700
GeneID (NCBI): 2276
Full Name: glutamate-ammonia ligase (glutamine synthetase)
Calculated MW: 374aa, 42 kDa
Observed MW: 44 kDa, 66-70 kDa

Recommended Dilutions:
WB: 1:500-1:2000
IHC: 1:100-1:400
IF: 1:50-1:500

Recommended Applications:
FC, IF, IHC, WB, ELISA
Cited Applications:
ELISA, IHC, WB
Species Specificity: human, mouse
Cited Species: human, mouse

Note-IHC: suggested antigen retrieval with TE buffer pH 9.0; (*) Alternatively, antigen retrieval may be performed with citrate buffer pH 6.0

Positive Controls:
WB: mouse liver tissue, mouse brain tissue, Jurkat cells
IHC: human liver cancer tissue
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Background Information

GLUL (Glutamine synthetase) is also named as GLULNS and belongs to the glutamine synthetase family. This enzyme has 2 functions: it catalyzes the production of glutamine and 4-aminobutanoate (gamma-aminobutyric acid, GABA), the latter in a pyridoxal phosphate-independent manner. By similarity, essential for proliferation of fetal skin fibroblasts (PMID: 18662667). Defects in GLUL are the cause of congenital systemic glutamine deficiency (CSGD). Organellar glutamine production is augmented secondary to an increase in the activity of glutamine synthetase in the lung and skeletal muscle (PMID: 7630137). There are other bands with higher (66 kDa, 97 kDa) and lower (30 kDa) molecular weights also detected besides the 42 kDa band indicating the proteolysis of GLUL protein by the ubiquitin system (PMID: 10091759).

Notable Publications

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Storage

Storage:
Store at -20°C. Stable for one year after shipment.
Storage Buffer:
PBS with 0.1% sodium azide and 50% glycerol pH 7.3.
Aliquoting is unnecessary for -20°C storage

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mouse liver tissue were subjected to SDS PAGE followed by western blot with 11037-2-AP (Glutamine synthetase antibody) at dilution of 1:1000 incubated at room temperature for 1.5 hours.

WB result of Glutamine synthetase antibody (11037-2-AP, 1:1000, incubated at room temperature for 1.5 hours) with sh-Control and sh-Glutamine synthetase transfected Jurkat cells

Immunofluorescent analysis of (4%) PFA fixed mouse brain tissue using 11037-2-AP (Glutamine synthetase antibody) at dilution of 1:50 and Alexa Fluor 488-Conjugated AffiniPure Goat Anti-Rabbit 

Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 11037-2-AP (Glutamine synthetase Antibody) at dilution of 1:200 (under 10x lens). heat mediated antigen retrieved with Tris-EDTA buffer(pH9).

Immunohistochemical analysis of paraffin-embedded human liver cancer tissue slide using 11037-2-AP (Glutamine synthetase Antibody) at dilution of 1:200 (under 40x lens). heat mediated antigen retrieved with Tris-EDTA buffer(pH9).

1X10^6 HepG2 cells were stained with 0.2ug Glutamine synthetase antibody (11037-2-AP, red) and control antibody (blue). Fixed with 90% MeOH blocked with 3% BSA (30 min). Alexa Fluor 488-conjugated AffiniPure Goat Anti-Rabbit IgG(H+L) with dilution 1:1000.