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Anti-GOT1 Antibody [KO/KD Validated]

Catalog # AP51988

Product Information

Application	WB, IHC, IF/IC
Primary Accession	P17174
Reactivity	Human, Mouse, Rat, Bovine, Mk
Host	Rabbit
Clonality	Polyclonal
Calculated MW	46248

Additional Information

Gene ID	2805
Other Names	Aspartate aminotransferase, cytoplasmic; cAspAT; Cysteine aminotransferase, cytoplasmic; Cysteine transaminase, cytoplasmic; cCAT; Glutamate oxaloacetate transaminase 1; Transaminase A
Target/Specificity	KLH-conjugated synthetic peptide encompassing a sequence within the N-term region of human GOT1. The exact sequence is proprietary.
Dilution	WB~~WB (1/500 - 1/1000) IHC~~1:100~500 IF/IC~~N/A
Format	Liquid in 0.42% Potassium phosphate, 0.87% Sodium chloride, pH 7.3, 30% glycerol, and 0.01% sodium azide.
Storage	Store at -20 °C.Stable for 12 months from date of receipt

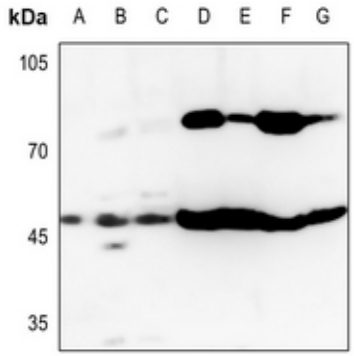
Protein Information

Name	GOT1 (HGNC:4432)
Function	Biosynthesis of L-glutamate from L-aspartate or L-cysteine (PubMed:21900944). Important regulator of levels of glutamate, the major excitatory neurotransmitter of the vertebrate central nervous system. Acts as a scavenger of glutamate in brain neuroprotection. The aspartate aminotransferase activity is involved in hepatic glucose synthesis during development and in adipocyte glyceroneogenesis. Using L-cysteine as substrate, regulates levels of mercaptopyruvate, an important source of hydrogen sulfide. Mercaptopyruvate is converted into H(2)S via the action of 3-mercaptopyruvate sulfurtransferase (3MST). Hydrogen sulfide is an important synaptic modulator and neuroprotectant in the brain. In addition, catalyzes (2S)-2- aminobutanoate, a by-product in the cysteine biosynthesis pathway (PubMed:27827456).
Cellular Location	Cytoplasm.

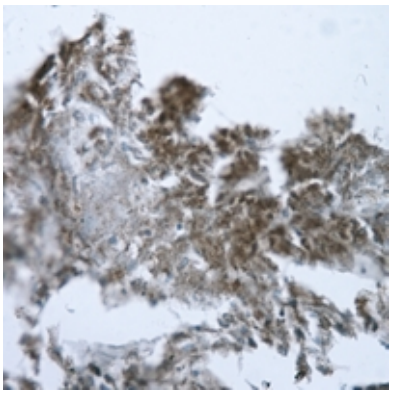
References

Bousquet-Lemercier B.,et al.Biochemistry 29:5293-5299(1990).
Wang C.Y.,et al.Submitted (JUL-1998) to the EMBL/GenBank/DDBJ databases.
Yu W.,et al.Submitted (MAR-1998) to the EMBL/GenBank/DDBJ databases.
Ota T.,et al.Nat. Genet. 36:40-45(2004).
Deloukas P.,et al.Nature 429:375-381(2004).

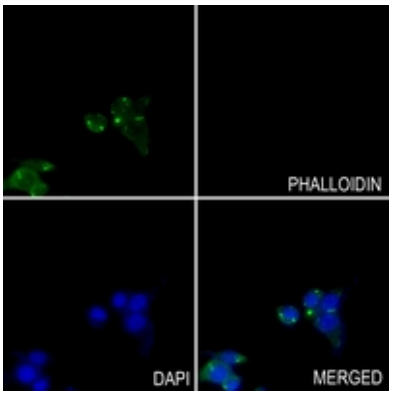
Images



Western blot analysis of GOT1 expression in HEK293T (A), Hela (B), DLD (C), mouse heart (D), mouse brain (E), rat heart (F), rat brain (G) whole cell lysates. (Predicted band size: 46 kD; Observed band size: 46 kD)

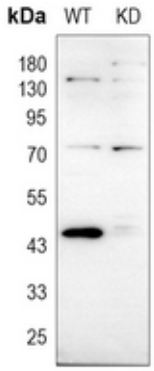


Immunohistochemical analysis of GOT1 staining in human colorectal cancer formalin fixed paraffin embedded tissue section. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0). The section was then incubated with the antibody at room temperature and detected using an HRP conjugated compact polymer system. DAB was used as the chromogen. The section was then counterstained with haematoxylin and mounted with DPX.



Immunofluorescent analysis of GOT1 staining in MCF7 cells. Formalin-fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 5-10 minutes and blocked with 3% BSA-PBS for 30 minutes at room temperature. Cells were probed with the primary antibody in 3% BSA-PBS and incubated overnight at 4 °C in a hidified chamber. Cells were washed with PBST and incubated with a AF488-conjugated secondary antibody (green) in PBS at room temperature in the dark. Phalloidin - AF594 was used to stain Actin filaments (red). DAPI was used to stain the cell nuclei (blue).

Western blot analysis of GOT1 expression in wild type (WT) and knockdown (KD) HeLa cell lysates.



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