GPT1 Protein, Human (His)

Cat. No.:	HY-P702494
Synonyms:	AAT1; Alanine aminotransferase 1; Alanine aminotransferase; ALAT1_HUMAN; ALT1; Glutamate pyruvate transaminase 1; Glutamic alanine transaminase 1; Glutamic pyruvate transaminase (alanine aminotransferase); Glutamic pyruvic transaminase 1; Glutamic--alanine transaminase 1; Glutamic--pyruvic transaminase 1; GPT 1; gpt; GPT1
Species:	Human
Source:	E. coli
Accession:	P24298 (A2-S496)
Gene ID:	2875
Molecular Weight:	58.5kDa

PROPERTIES

Appearance	Lyophilized powder.
Formulation	Lyophilized from a 0.22 μm filtered solution of Tris-based buffer,50% glycerol.
Endotoxin Level	<1 EU/μg, determined by LAL method.
Reconsititution	It is not recommended to reconstitute to a concentration less than 100 μg/mL in ddH_2O.
Storage & Stability	Stored at -20°C for 2 years. After reconstitution, it is stable at 4°C for 1 week or -20°C for longer (with carrier protein). It is recommended to freeze aliquots at -20°C or -80°C for extended storage.
Shipping	Room temperature in continental US; may vary elsewhere.

DESCRIPTION

Background	Argininosuccinate lyase (ASL) protein serves a pivotal role by catalyzing the reversible cleavage of L-argininosuccinate into fumarate and L-arginine, a crucial step in the urea cycle. This process primarily contributes to hepatic nitrogen detoxification, leading to the excretion of urea, and facilitates de novo L-arginine synthesis in nonhepatic tissues. ASL emerges as an essential regulator of both intracellular and extracellular L-arginine pools, playing a critical role in maintaining nitrogen homeostasis. As part of the citrulline-nitric oxide cycle, ASL forms tissue-specific multiprotein complexes with argininosuccinate synthase (ASS1), transport protein SLC7A1, and nitric oxide synthase (NOS1, NOS2, or NOS3). This complex allows for cell-autonomous L-arginine synthesis while participating in the channeling of extracellular L-arginine to the nitric oxide synthesis pathway, showcasing the multifaceted regulatory functions of ASL in nitrogen metabolism and cellular signaling.

Caution: Product has not been fully validated for medical applications. For research use only.

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