Recombinant ARLY protein (His tag)

Catalog Number	542012
Synonyms	ASAL; Arginosuccinase
Species	Human
Expression System	E. coli
Accession	P04424
Molecular Weight	Predictes a molecular mass of 53.19 kDa. In SDS-PAGE under reducing conditions, it migrates as an approximately 54 kDa band.

Product Information

Sequence Region	2-464
Form	Lyophilized powder
Formulation	Lyophilized from sterile PBS, pH 7.4
Purity	>87%, by SDS-PAGE with Coomassie Brilliant Blue staining.
Endotoxin	Not tested.
Activity	Not tested.
Stability	Samples are stable for up to twelve months from date of receipt at -70℃
Protein Construction	DNA encoding 2-464 aa (P04424) were fused with 6His tag.

Storage & Handling

Reconstitution	Reconstitute at 0.25 μg/μl in sterile water for short-term storage. Reconstitution with 50% glycerol solution is recommended for longer term storage (see Stability and Storage for more details). If a different concentration is needed for your purposes please adjust the reconstitution volume as required (please note: the ion concentration of the final solution will vary according to the volume used). Note: Centrifuge vial before opening. When reconstituting, gently pipet and wash down the sides of the vial to ensure full recovery of the protein into solution.
Storage	Store it under sterile conditions at -20℃ to -80℃. It is recommended that the protein be aliquoted for optimal storage. Avoid repeated freeze-thaw cycles.
Shipping	In general, recombinant proteins are provided as lyophilized powder which are shipped at ambient temperature. Bulk packages of recombinant proteins are provided as frozen liquid. They are shipped out with blue ice unless customers require otherwise.

Description

Description	Recombinant Human Argininosuccinate Lyase (ASAL) Fragment (residues 2-464) is a high-purity protein engineered for structural and biochemical studies. This stable, soluble fragment retains the functional domain essential for catalyzing the reversible cleavage of L-argininosuccinate, making it ideal for investigating urea cycle dynamics and nitric oxide synthesis pathways. Argininosuccinate lyase (ASAL), encoded by the ASL gene in humans, is a critical enzyme in the urea cycle, catalyzing the reversible cleavage of L-argininosuccinate into fumarate and L-arginine. This reaction supports hepatic nitrogen detoxification via urea production and enables de novo L-arginine synthesis in nonhepatic tissues. ASAL also regulates intracellular and extracellular L-arginine pools and, as part of the citrulline-nitric oxide cycle, forms tissue-specific complexes with argininosuccinate synthase (ASS1), transporter SLC7A1, and nitric oxide synthases (NOS1, NOS2, or NOS3) to facilitate cell-autonomous L-arginine synthesis and channel extracellular L-arginine toward nitric oxide production. These roles underscore its importance in metabolic homeostasis and signaling pathways.