Data Sheet (Cat.No.TMPY-03172)

TargetMol

Argininosuccinate lyase Protein, Human, Recombinant (His & GST)

General Information

Synonyms:	ASAL;argininosuccinate lyase;ASL
Protein Construction:	A DNA sequence encoding the human ASL(P04424) (Met1-Ala464) was fused with the N-terminal polyhistidine-tagged GST tag at the N-terminus. Predicted N terminal: Met
Species:	Human
Expression Host:	Baculovirus Insect Cells
Accession:	P04424
Molecular Weight:	79.5 kDa (predicted); 68 kDa (reducing conditions)

QC Testing

Biological Activity:	Activity testing is in progress. It is theoretically active, but we cannot guarantee it. If you require protein activity, we recommend choosing the eukaryotic expression version first.
Purity:	> 90 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing 20 mM Tris, 500 mM Nacl, 3 mM DTT, pH 8.0, 10% glycerol. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The recycling of citrulline by argininosuccinate synthase 1 (ASS1) and argininosuccinate lyase (ASL) is crucial to maintain arginine availability and nitric oxide (NO) production. Nitric oxide (NO) plays an established role in numerous physiological and pathological processes, but the specific cellular sources of NO in disease pathogenesis remain unclear, preventing the implementation of NO-related therapy. Argininosuccinate lyase (ASL) is the only enzyme able to produce arginine, the substrate for NO generation by nitric oxide synthase (NOS)

isoforms. Induction of endogenous NO production by enterocytes with supplements that upregulate ASL expression and complement its substrates results in improved epithelial integrity and alleviation of colitis and of inflammation-associated colon cancer.

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