

BOLA1 Protein, Human, Recombinant (His)

General Information

Synonyms:	CGI-143;bolA family member 1
Protein Construction:	A DNA sequence encoding the human BOLA1 (Q9Y3E2) (Met1-Pro137) was expressed with a polyhistidine tag at the N-terminus. Predicted N terminal: His
Species:	Human
Expression Host:	E. coli
Accession:	Q9Y3E2
Molecular Weight:	16.4 kDa (predicted); 10 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:	Please contact us for more information.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS, pH 7.4. 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

BOLA1 is a mitochondrial protein that counterbalances the effect of L-buthionine-(S,R)-sulfoximine (BSO)-induced glutathione (GSH) depletion on the mitochondrial thiol redox potential. Furthermore, overexpression of BOLA1 nullifies the effect of BSO and S-nitrosocysteine on mitochondrial morphology. Conversely, knockdown of the BOLA1 gene increases the oxidation of mitochondrial thiol groups. Supporting a role of BOLA1 in controlling the mitochondrial thiol redox potential is that BOLA1 orthologs only occur in aerobic eukaryotes. A measured

interaction of BOLA1 with the mitochondrial monothiol glutaredoxin GLRX5 provides hints for potential mechanisms behind BOLA1's effect on mitochondrial redox potential.

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