

# Recombinant Full Length Human ATOX1 Protein, with Cu (I)

**Cat. No.** ATOX1-225H    **Lot. No.** (See product label)

## SPECIFICATION

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
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| <b>Product Overview</b> | Recombinant full length Human Cu (I)-ATOX1 (aa 1-68) was expressed in E. coli. Binding of Cu (I) to the protein was confirmed by ICP.                                                                                                                                                                                                                                                                                                                                          |
| <b>Species</b>          | Human                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| <b>Source</b>           | E.coli                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| <b>ProteinLength</b>    | aa 1-68                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>Description</b>      | This gene encodes a copper chaperone that plays a role in copper homeostasis by binding and transporting cytosolic copper to ATPase proteins in the trans-Golgi network for later incorporation to the ceruloplasmin. This protein also functions as an antioxidant against superoxide and hydrogen peroxide, and therefore, may play a significant role in cancer carcinogenesis. Because of its cytogenetic location, this gene represents a candidate gene for 5q-syndrome. |
| <b>Form</b>             | In 20 mM Phosphate buffer pH 7.0.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>Molecular Mass</b>   | 7.4 kDa                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| <b>AA Sequence</b>      | MPKHEFSVDM TCGGCAEAVS RVLNKLGGVK YDIDLPNKKV CIESEHSMDT<br>LIATLKKTGK TVSYLGLE                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Purity</b>           | >95% by SDS-PAGE. The protein was observed as a single band migrating at a molecular weight < 10 kDa.                                                                                                                                                                                                                                                                                                                                                                          |

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|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Notes</b>            | To avoid oxidation and leaking of the Cu(I) bound to the protein, keep and use the sample under inert atmosphere.                                                                                                                                                                                                      |
| <b>Storage</b>          | Store at - 20 centigrade. The protein is stable at 4 centigrade for at least 2 weeks and at 25 centigrade for at least several hours. After initial defrost, aliquot product into individual tubes under inert atmosphere and refreeze at - 20 centigrade. Avoid repeated freeze/thaw cycles. Avoid exposition to air. |
| <b>Concentration</b>    | 1 mg/ml                                                                                                                                                                                                                                                                                                                |
| <b>GENE INFORMATION</b> |                                                                                                                                                                                                                                                                                                                        |
| <b>Gene Name</b>        | ATOX1 ATX1 antioxidant protein 1 homolog (yeast) [ Homo sapiens ]                                                                                                                                                                                                                                                      |
| <b>Official Symbol</b>  | ATOX1                                                                                                                                                                                                                                                                                                                  |
| <b>Synonyms</b>         | ATOX1; ATX1 antioxidant protein 1 homolog (yeast); ATX1 (antioxidant protein 1, yeast) homolog 1; copper transport protein ATOX1; HAH1; metal transport protein ATX1; ATX1; MGC138453; MGC138455;                                                                                                                      |
| <b>Gene ID</b>          | 475                                                                                                                                                                                                                                                                                                                    |
| <b>mRNA Refseq</b>      | NM_004045                                                                                                                                                                                                                                                                                                              |
| <b>Protein Refseq</b>   | NP_004036                                                                                                                                                                                                                                                                                                              |
| <b>MIM</b>              | 602270                                                                                                                                                                                                                                                                                                                 |
| <b>UniProt ID</b>       | O00244                                                                                                                                                                                                                                                                                                                 |
| <b>Chromosome</b>       | 5q32                                                                                                                                                                                                                                                                                                                   |

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|-----------------|--------------------------------------------------------------------------------------------------------------------------------|
| <b>Location</b> |                                                                                                                                |
| <b>Pathway</b>  | Mineral absorption, organism-specific biosystem; Mineral absorption, conserved biosystem;                                      |
| <b>Function</b> | copper chaperone activity; copper ion binding; copper-dependent protein binding; metal ion binding; metallochaperone activity; |

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