Recombinant Human ACO1/irp1 Protein (His Tag)

Catalog Number: PKSH031334

Note: *Centrifuge before opening to ensure complete recovery of vial contents.*

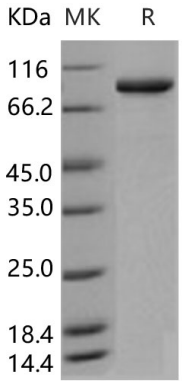
Description

Species	Human
Source	Baculovirus-Insect Cells-derived Human ACO1/irp1 protein Met 1-Lys 889, with an N-terminal His
Calculated MW	101 kDa
Observed MW	90 kDa
Accession	P21399
Bio-activity	Not validated for activity

Properties

Purity	> 95 % as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 EU per μg of the protein as determined by the LAL method.
Storage	Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to -80 ℃. Reconstituted protein solution can be stored at 4-8℃ for 2-7 days. Aliquots of reconstituted samples are stable at < -20℃ for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from sterile 50mM Tris, 100mM NaCl, pH 8.0, 10% glycerol, 2mM DTT Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants before lyophilization. Please refer to the specific buffer information in the printed manual.
Reconstitution	Please refer to the printed manual for detailed information.

Data



> 95 % as determined by reducing SDS-PAGE.

Background

Aconitase 1(ACO1) or IRP1 is one member of the aconitase family that contains a diverse group of iron-sulphur(Fe-S) isomerases and two types of iron regulatory protein. Aconitase exits in two forms: one is soluble and the other is mitochondrial. ACO1 is the soluble existing form, and the mitochondrial form is ACO2. Residues from all three N-terminal domains and the larger C-terminal domain contribute to the active site region. When the enzyme is activated, it gains an additional iron atom. ACO1 can assume two different functions in cells, depending on different conditions. During iron scarcity or oxidative stress, ACO1 binds to mRNA stem-loop structures called iron responsive elements to modulate the translation of iron metabolism genes. In iron-rich conditions, ACO1 binds an iron-sulfur cluster to function as a cytosolic aconitase.

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