Recombinant Protein Technical Manual

Recombinant Human ACO1/irp1 Protein (His Tag)

RPES4817

Product Data:

Product SKU: RPES4817

Size: 10µg

Species: Human

Expression host: Baculovirus-Insect Cells

Uniprot: P21399

Protein Information:

Molecular Mass: 101 kDa

AP Molecular Mass: 90 kDa

Tag: N-His

Bio-activity:

Purity: > 95 % as determined by reducing SDS-PAGE.

Endotoxin: < 1.0 EU per µg as determined by the LAL method.

Storage: Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. 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% gly, 2mM DTT

Reconstitution: Please refer to the printed manual for detailed information.

Application:

Synonyms: ACONS;HEL60;IREB1;IREBP;IREBP1;IRP1

Immunogen Information:

Sequence: Met 1-Lys 889

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.