Recombinant Human UCP1 Protein (His Tag)

Catalog Number: PDEH100795

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

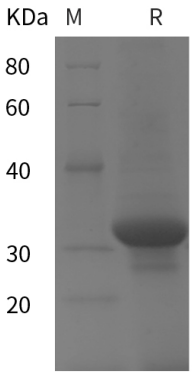
Description

Species	Human
Source	E.coli-derived Human UCP1 protein Met1-Thr307, with an N-terminal His
Calculated MW	33.7 kDa
Observed MW	31 kDa
Accession	P25874
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 10 EU/mg 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°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.
Shipping	This product is provided as lyophilized powder which is shipped with ice packs.
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with 5% Trehalose and 5% Mannitol.
Reconstitution	It is recommended that sterile water be added to the vial to prepare a stock solution of 0.5 mg/mL. Concentration is measured by UV-Vis.

Data



SDS-PAGE analysis of Human UCP1 proteins, 2 μg/lane of Recombinant Human UCP1 proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 31 kDa.

Background

Mitochondrial brown fat uncoupling protein 1 (UCP1, also Thermogenin and UCP) is a 33 kDa member of the mitochondrial carrier family of proteins. Human UCP1 are both 307 amino acids (aa) in length and contain three solcar repetitive regions and six transmembrane segments. UCP1 is found in brown adipose tissue, where it becomes activated by fatty acids and inhibited by nucleotides. It functions as a mitochondrial transporter that creates a proton leak across the inner mitochondrial membrane, uncoupling oxidative phosphorylation from ATP synthesis. As a result, energy is dissipated in the form of heat.

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