

Recombinant Mouse ACPD Protein(His Tag)

Catalog Number: PDMM100232

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

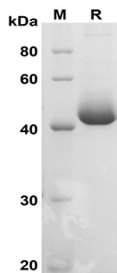
Description

Species	Mouse
Source	Mammalian-derived Mouse ACPD protein Met1-Asn381, with an C-terminal His
Calculated MW	41.8 kDa
Observed MW	43 kDa
Accession	Q8CE08
Bio-activity	Not validated for activity

Properties

Purity	> 95% as determined by reducing SDS-PAGE.
Endotoxin	< 1.0 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 Mouse ACPD proteins, 2µg/lane of Recombinant Mouse ACPD proteins was resolved with SDS-PAGE under reducing conditions, showing bands at 43 kDa

Background

Prostatic acid phosphatase (PAP, or ACP), also known as prostatic specific acid phosphatase (PSAP), is an enzyme produced by the prostate. As a non-specific phosphomonoesterase, Prostatic acid phosphatase is synthesized and secreted into seminal plasma under androgenic control. The enzyme is a dimer of molecular weight around 100 kDa. Prostatic acid phosphatase is a clinically important protein for its relevance as a biomarker of prostate carcinoma. Furthermore, it has a potential role in fertilization. The major action of PAP is to dephosphorylate macromolecules with the help of catalytic residues (His(12) and Asp(258)) that are located in the cleft between two domains. Cellular prostatic acid phosphatase (cPAP), an authentic tyrosine phosphatase, is proposed to function as a negative growth regulator of prostate cancer (PCa) cells in part through its dephosphorylation of ErbB-2. cPAP functions as a neutral protein tyrosine phosphatase (PTP) in prostate cancer cells and dephosphorylates HER-2/ErbB-2/Neu (HER-2: human epidermal growth factor receptor-2) at the phosphotyrosine (p-Tyr) residues. Injection of the secretory isoform of PAP has potent antinociceptive effects in mouse models of chronic pain. This enzyme exhibits ecto-5'-nucleotidase activity, is widely distributed, and implicated in the formation of chronic pain. Additionally, PAP could be a target molecule in specific immunotherapy for patients with nonprostate adenocarcinomas including colon and gastric cancers.