

AR09161PU-L

Recombinant human ACP1 / LMW-PTPase (aa 1-158), His-tagged

Alternate names:

Adipocyte acid phosphatase, HAAP, Low molecular weight cytosolic acid phosphatase, Low molecular weight phosphotyrosine protein phosphatase, Red cell acid phosphatase 1

Quantity:

0.5 mg

Concentration:

1.0 mg/ml (determined by Bradford assay)

Background:

Acid phosphatase 1, soluble, also known as ACP1, belongs to the phosphotyrosine protein.

It functions as an acid phosphatase and a protein tyrosine phosphatase (PTPase) present in all human tissues, including adipocytes. This enzyme hydrolyzes protein tyrosine phosphate to protein tyrosine and orthophosphate, and also orthophosphoric monoesters to alcohol and orthophosphate.

Uniprot ID:

[P24666](#)

NCBI:

[NP_009030](#)

GenelD:

[52](#)

Species:

Human

Source:

E. coli

Format:

State: Liquid purified protein

Purity: >95% by SDS - PAGE

Buffer System: 20 mM MES 6.0, 0.1 mM PMSF, 2 mM EDTA, 10% glycerol

Endotoxin Level: < 1.0 EU per 1 µg of protein (determined by LAL method)

Description:

Recombinant Human ACP1, fused to His-tag at N-terminus, was expressed in E.coli and purified by conventional chromatography techniques.

AA Sequence:

MGSSHHHHHH SSGLVPRGSH MAEQATKSVL FVCLGNICRS PIAEAVFRKL VTDQNIENW
VIDSGAVSDW NVGRSPDPRA VSCLRNHGIH TAHKARQITK EDFATFDYIL CMDESRLDL
NRKSNQVKTC KAKIELLGSI DPQKQLIIE PYGNDSDFE TVYQQCVRCC RAFLEKAH

Biological Activity: Specific activity is > 15,000 units/mg, and is defined as the amount of enzyme that hydrolyze 1.0 nmoles of p-nitrophenyl phosphate (pNPP) per minute at pH 7.5 at 37°C

Molecular weight: 20.1 kDa 20.1 kDa (178 aa), confirmed by MALDI-TOF

Storage:

Store undiluted at 2-8°C for up to two weeks or (in aliquots) at -20°C or -70°C for longer.

Avoid repeated freezing and thawing.

Shelf life: one year from despatch.

General Readings:

1. De Lorenzo A, Di Renzo L, Puja A, Saccucci P, Gloria-Bottini F, Bottini E. A study of acid phosphatase locus 1 in women with high fat content and normal body mass index. *Metabolism*. 2009 Mar;58(3):351-4. doi: 10.1016/j.metabol.2008.10.007. PubMed PMID: 19217450.

2. Banci M, Saccucci P, D'Annibale F, Dofcaci A, Trionfera G, Magrini A, et al. ACP1 genetic polymorphism and coronary artery disease: an association study. *Cardiology*.

2009;113(4):236-42. doi: 10.1159/000203405. Epub 2009 Feb 25. PubMed PMID: 19246900.

Pictures:

Recombinant human ACP1, 1-158 aa, His-tagged: 15% SDS-PAGE (3 µg)

