

Alkaline Phosphatase (Germ type) /ALPG Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	ALPPL2;PLAP-like;GCAP;ALPG;Alkaline phosphatase, placental-like;ALPPL;Alkaline Phosphatase;ALP-1
Protein Construction:	Ile20-Asp503
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P10696
Molecular Weight:	55.48 kDa (predicted). Due to glycosylation, the protein migrates to 56-70 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Anti-Alkaline Phosphatase Antibody, hFc Tag at 0.5µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Human Alkaline Phosphatase (Germ type) , His Tag with the EC50 of 23.4ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 90% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing 25 mM Tris, 100 mM NaCl, 1 mM MgCl ₂ (pH 7.5). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:

Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

Alkaline phosphatase can be considered "our favorite enzyme" for reasons apparent to those who diagnose and treat metabolic bone diseases or who study skeletal biology. Few might know, however, that alkaline

phosphatase likely represents the most frequently assayed enzyme in all of medicine. Elevated activity in the circulation is universally recognized as a marker for skeletal or hepatobiliary disease.

Reference

Siller AF, Whyte MP. Alkaline Phosphatase: Discovery and Naming of Our Favorite Enzyme. J Bone Miner Res. 2018 Feb;33(2):362-364. doi: 10.1002/jbmr.3225. Epub 2017 Aug 14. PMID: 28727174.

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