



LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human ACP-11R Protein
Catalog Number: hRP-0128
Manufacturer: LD Biopharma, Inc.

Introduction

Human ACP (acid phosphatase, prostate) gene encodes an enzyme that catalyzes the conversion of orthophosphoric monoester to alcohol and orthophosphate. It is synthesized under androgen regulation and is secreted by the epithelial cells of the prostate gland. An alternatively spliced transcript variant encoding a longer isoform has been found for this gene. This isoform contains a transmembrane domain and is localized in the plasma membrane-endosomal-lysosomal pathway. This protein was used as human prostate cancer vaccines (Provenge), which FDA accepted in 2010 for treatment of advanced prostate cancer that has metastasis.

Recombinant human ACP-11R protein was constructed with C-terminal tag of 11 arginine domain, which will efficiently deliver protein intracellularly. This protein was expressed in *E. coli* as inclusion bodies, refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified. Incubating this protein in various culture media at 2 – 8 µg/ml may be used for studying of human prostate cancer treatment using intracellular protein delivery strategy for immuno-stimulation.

Gene Symbol: ACP
Accession Number: NP_001090.2 (Isoform 1)
Species: Human
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, arginine, DTT and Glycerol.
Storage: In Liquid. Keep at -20°C for long term storage. Product is stable at 4 °C for at least 7 days

Key References

Hongyan Zhou, et al. *Generation of induced pluripotent stem cells using recombinant protein*. Cell Stem Cell. Vol 4. Issue 5: 381-384 (2009)



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MCneel,D.G., et al., Safety and immunological efficacy of a DNA vaccine encoding prostatic acid phosphatase in patients with stage D0 prostate cancer. *J.clin.Oncol.* 27 (25), 4047-4054. (2009)

Applications

1. Human prostate specific tumor antigen.
2. Immunogen for specific antibody production.

Quality Control

1. Purity: > 90% by SDS-PAGE.
2. Other functional activities: Not tested yet.

Recombinant Protein Sequence

29aa_Tag_KELKFVTLVFRHGDRSPIDTFPTDPIKESWPQFGQLTQLGMEQHYELGEYIRK
RYRKFLNESYKHEQVYIRSTDVDRTLMSAMTNLAALVPPEGVSIWNPILLWQPIPVHTVPLSED
QLLYLPFRNCPRFQELESETLKSEEFQKRLHPYKDFIATLGKLSGLHGQDLFGIWSKVYDPLYC
ESVHNFTLPSRATEDTMTKLRELSLSSLYGIHKQKEKSRLQGGVLVNEILNHMKRATQIPS
YKKLIMYSAHDTTVSGLQMALDVYNGLLPPYASCHLTELYFEKGEYFVEMYRNETQHEPYPLM
LPGCSPSCPLERFAELVGPVIPQDWSTECMTTNSHQ**LEESGGGGSPGRRRRRRRRRR**