LD Biopharma, Inc.
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- PRODUCT DATA SHEET -

Name of Product: Recombinant Human APOBEC4 Protein
Catalog Number: hRP-1676
Manufacturer: LD Biopharma, Inc.

Introduction

Human putative C->U-editing enzyme APOBEC-4 gene encodes a member of the AID/APOBEC family of polynucleotide (deoxy)cytidine deaminases, which convert cytidine to uridine. Other AID/APOBEC family members are involved in mRNA editing, somatic hypermutation and recombination of immunoglobulin genes, and innate immunity to retroviral infection. APOBEC4 is expressed primarily in testis which suggets the possibility that it is an editing enzyme for mRNA involved in spermatogenesis. Recent data also indicated that APOBEC-4 gene locus SNP may also plays a role in auto-immune-diseases, such as systemic lupus erythematosus.

Full-length human APOBEC4 cDNA (366 aa, derived from BC021711) was constructed by full-length gene synthesis with codon optimization and expressed with a small T7-His-TEV cleavage site Tag (29aa) fusion at its N-terminal. This protein is expressed in E Coli as inclusion bodies. The final product was refolded using our unique “temperature shift inclusion body refolding” technology and chromatographically purified.

Gene Symbol:	APOBEC4 (C1orf169)
Accession Number:	NP_982279
Species:	Human
Size:	50 µg / Vial
Composition:	0.5 mg/ml, sterile-filtered, in 20 mM pH 8.0 Tris-HCl Buffer, with proprietary formulation of NaCl, KCl, EDTA, Sucrose and DTT.
Storage:	In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Rogozin IB, et al., *APOBEC4, a new member of the AID/APOBEC family of*

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polynucleotide (deoxy)cytidine deaminases predicted by computational analysis. Cell Cycle 4 (9), 1281-1285 (2005)

Yang W, et al., *Meta-analysis followed by replication identifies loci in or near CDKN1B, TET3, CD80, DRAM1, and ARID5B as associated with systemic lupus erythematosus in Asians.* Am. J. Hum. Genet. 92 (1), 41-51 (2013)

Applications

1. May be used for in vitro APOBEC4 protein mediated mRNA editing regulatory in spermatogenesis study by intracellular delivery of this protein with “ProFectin” reagent.
2. May be used for APOBEC4 protein-protein interaction assay
3. May be used for specific antibody production.

Quality Control

Purity: > 90% by SDS-PAGE.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHHENLYFQGGEFEPIYEEYLANHGTIVKPYYWLSFSLDCSNCPYHIR
TGEEARVSLTEFCQIFGFPYGTTFPQTKHLTFYELKTSSGSLVQKGHASSCTGNYIHPESMLFE
MNGYLDSAIYNNDSIRHIILYSNNSPCNEANHCCISKMYNFLITYPGITLSIYFSQLYHTEMDF
PASAWNREALRSLASLWPRVVLSPISGGIWHSVLHSFISGVSGSHVFQPILTGRALADRHNAYE
INAITGVKPYFTDVLLQTKRNPNTKAQEALESYPLNNAFPGQFFQMPSGQLQPNLPPDLRAPVV
FVLVPLRDLPPMHMGQNPNKPRNIVRHLNMPQMSFQETKDLGRLPTGRSVEIVEITEQFASSKE
ADEKKKKKGKK