



LD Biopharma, Inc.
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<http://www.ldbiopharma.com>

- PRODUCT DATA SHEET -

Name of Product: Recombinant B18R Protein
Catalog Number: VRP-0366
Manufacturer: LD Biopharma, Inc.

Introduction

The B18R protein is a vaccinia virus-encoded receptor with specificity for neutralizing Type I Interferons activity to block double-strain RNA induced immuno-reaction pathway during viral infection. Recombinant B18R protein was recently utilized to enable increasing mRNA mediated iPSC generation efficiency during RNA transfection protocols designed to convert human somatic donor cells into iPSCs via direct delivery of modified synthetic mRNAs for OCT4, SOX2, KLF4 and MYC (OSKM) and Lin28..

To generate active full-length B18R protein, B18R cDNA was constructed with 31 N-terminal T7/His tag and expressed in E.coli as inclusion bodies. The final product was refolded with our unique “temperature shift inclusion body refolding” technology and chromatographically purified as soluble/active protein.

Gene Symbol: B18R
Accession Number: VACB18RW
Species: Vaccinia Viral Protein
Size: 25 µg / Vial
Composition: 0.2 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 -80°C for long term storage. Product is stable at 4 °C for at least 30 days.

Key References

Smith,G.L. et al. *Two vaccinia virus proteins structurally related to the interleukin-1*



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receptor and the immunoglobulin superfamily. J. Gen. Virol. 72 (PT 3), 511-518 (1991).

Luigi Warren, et al. *Highly efficient reprogramming to Pluripotency and directed differentiation of human cells with synthetic modified mRNA. Cell Stem Cell 7, 1-13 (2010).*

Applications

Combined 100 ng/ml bFGF with 300 ng/ml B18R recombinant protein in Stemgent Pluriton medium and mRNA kit will generate >3 iPS colonies / 1×10^5 human BJ cell / well (6 well plate).

Quality Control

1. Purity: > 95% by SDS-PAGE.
2. Functional Test: Measured by neutralization of IFN-alpha effects on MCF7 cells in RT-PCR assay using IFN-alpha specific induced target gene index.
3. For mRNA mediated iPS generation application, recommended recombinant B18R protein concentration in culture PluritonTM medium should be at level of 250 to 350 ng/ml.

Recombinant Protein Sequence

MASMTGGQQMGRGHHHHHGNLYFQGGEFELHSYAIDIENEITEFFNKMRDTLPAKDSKWLNPAC
CMFGGTMNDIAALGEPFSAKCPPIEDSLLSHRYKDYVVKWERLEKNRRRQVSNKRVKHGDLWIA
NYTSKFSNRRYLCTVTTKNGDCVQGIVRSHIRKPPSCIPKTYELGTHDKYGIDLYCGILYAKHY
NNITWYKDNKEINIDDIKYSQTGKELI IHNPELEDSGRYDCYVHYDDVRIKNDIVVSRCKILTV
IPSQDHRFKLILDPKINVTIGEPANITCTAVSTSLIDDLVLEWENPSGWLIGFDFDVSVLTS
RGGITEATLYFENVTEEYIGNTYKCRGHNYFEKTLTTTVVLE