



LD Biopharma, Inc.
7384 Trade Street, Suite B
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- PRODUCT DATA SHEET -

Name of Product: Recombinant **sfGFP-Protein L** Fusion Protein
Catalog Number: BRP-4335
Manufacturer: LD Biopharma, Inc. USA

Introduction

Protein L, isolated from the surface of the bacterial species *Peptostreptococcus magnus*, is known to bind immunoglobulins through interactions with the light (L) chain. Unlike Protein A or G, Protein L exhibits a broader binding range, interacting with representatives of all antibody classes, including IgG, IgM, IgA, IgE, and IgD. Additionally, it also binds to single-chain variable fragments (scFv) and Fab fragments. To enhance the monitoring of Protein L's antibody-binding capacity, superGFP was fused to Protein L, creating a fusion protein that facilitates easy detection.

Protein-L-Linker-SuperGFP fusion protein cDNA was constructed with codon optimization gene synthesis and expressed with a human N-terminal His Tag (8aa) fusion. This protein was expressed in *E. coli* as soluble protein. The final product was affinity/chromatographically purified.

Gene Symbol: sfGFP -Protein-L
Accession Number: ASL68970 + AAA25612
Species: Synthetic
Size: 50 µg / Vial
Composition: 1.0 mg/ml, sterile-filtered, in 20% glycerol / PBS buffer
Storage: In Liquid. Keep at -80°C for long term storage. Product is stable at 4 °C for at least two weeks.

Key References

Pédelacq J-D, et al., **Engineering and characterization of a superfolder green fluorescent protein**. *Nature Biotechnology*, 24(1), 79-88. doi: 10.1038/nbt1172 (2005)

Kastern, W., et al., **Structure of peptostreptococcal protein L and identification of a repeated immunoglobulin light chain-binding domain**. *J. Biol. Chem.* 267 (18), 12820-12825 (1992)



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Zhili Zheng, et al. **Protein L: a novel reagent for the detection of Chimeric Antigen Receptor (CAR) expression by flow cytometry.** *Journal of Translational Medicine* volume 10, Article number: 29 (2012)

Applications

1. May be used for in vitro antibody mediated assay, such as detection of scFv on CAR-T cell using flow-cytometry with Protein-L-sfGFP fusion protein or live staining using GFP for monitoring stem cell differentiation.

Quality Control

Purity: > 90% by SDS-PAGE.

Fusion Protein Ex λ : 488 Em λ: 510

Recombinant sfGFP-Protein-L Fusion Protein Sequence (70.0 kD)

MKHHHHHHQVSKGEEELFTGVVPIILVELDGDVNGHKFSVRGEGEGDATNGKLTTLKFICTTGKLPVPWPTLV
TTLTYGVQCFSRYDPDHMKRHDFFKSAMPEGYVQERTISFKDDGTYKTRAEVKFEGLTLVNRIELKGIDFK
EDGNILGHKLEYNFNHNHNYITADKQKNGIKANFKIRHNVEDGSVQLADHYQQNTPIGDGPVLLPDNHYL
STQSVLSKDPNEKRDMVLLLEFVTAAGITHGMDELYKSGLRSGGSGGENLYFQGSEETPETPETDSEEEV
TIKANLIFANGSTQTAEFKGTFEKATSEAYAYADTLKKNNGEYTVDVADKGYTLNIKFAGKEKTPEEPKE
EVTIKANLIYADGKTQTAEFKGTFEATAEAYRYADALKKNNGEYTVDVADKGYTLNIKFAGKEKTPEEP
KEEVTIKANLIYADGKTQTAEFKGTFEATAEAYRYADLLAKENGYTVDVADKGYTLNIKFAGKEKTPE
EPKEEVTIKANLIYADGKTQTAEFKGTFAEATAEAYRYADLLAKENGYTADLEDGGYTINIRFAGKKVD
EKPEEKEQVTIKENIYFEDGTVQTATFKGTFAEATAEAYRYADLLSKEHGKYTADLEDGGYTINIRFAG