

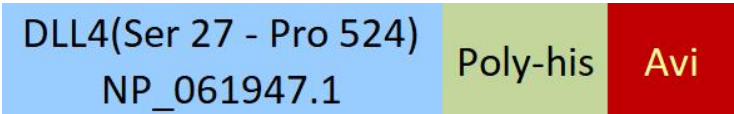
Features

- Designed under ISO 9001:2015 and ISO 13485:2016
- Manufactured and QC tested under a GMP compliance factory
- FDA DMF filed
- Animal-Free materials
- Beta-lactam materials free
- Batch-to-batch consistency
- Stringent quality control tests

Source

GMP Biotinylated Human DLL4 Protein, His,Avitag(GMP-DL4H23) is expressed from human 293 cells (HEK293). It contains AA Ser 27 - Pro 524 (Accession # [NP_061947.1](#)).
Predicted N-terminus: Ser 27

Molecular Characterization



This protein carries a polyhistidine tag at the C-terminus, followed by an Avi tag (Avitag™).

The protein has a calculated MW of 57.9 kDa. The protein migrates as 61 kDa±3 kDa under reducing (R) condition (SDS-PAGE) due to glycosylation.

Labeling

Biotinylation of this product is performed using Avitag™ technology. Briefly, the single lysine residue in the Avitag is enzymatically labeled with biotin.

Biotinylation

As determined by Quantitative ELISA binding assay against streptavidin.

Endotoxin

Less than 10 EU/mg by the LAL method / rFC method.

Host Cell Protein

<0.5 ng/μg of protein tested by ELISA.

Host Cell DNA

<0.02 ng/μg of protein tested by qPCR.

Sterility

The sterility testing was performed by membrane filtration method described in USP<71> and Ph. Eur. 2.6.1.

Mycoplasma

Negative.

Purity

>95% as determined by SDS-PAGE.

Formulation

Lyophilized from 0.22 μm filtered solution in PBS, pH7.4 with protectants.
Contact us for customized product form or formulation.

Shipping

This product is supplied and shipped with blue ice, please inquire the shipping cost.

Storage

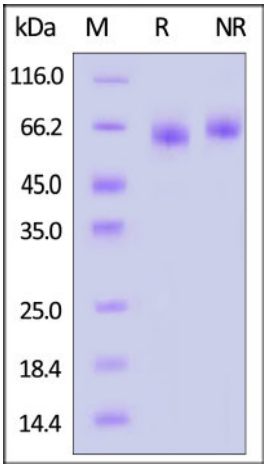
Upon receipt, store it immediately at -20°C or lower for long term storage.
Please avoid repeated freeze-thaw cycles.

This product is stable after storage at:

- -20°C to -70°C for 5 years in lyophilized state;
- -70°C for 12 months under sterile conditions after reconstitution.

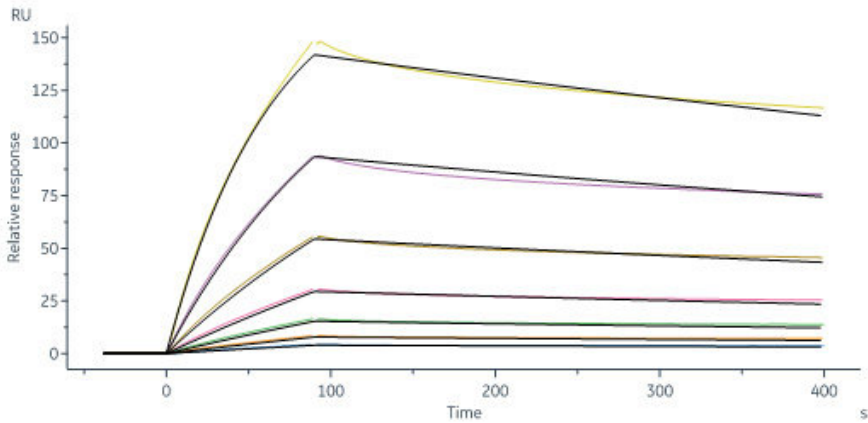
SDS-PAGE





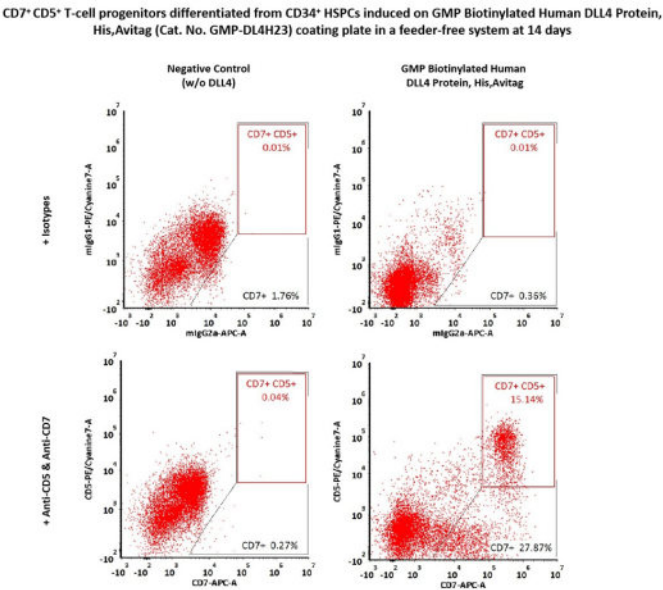
GMP Biotinylated Human DLL4 Protein, His,Avitag on SDS-PAGE under reducing (R) and non-reducing (NR) conditions. The gel was stained with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-SPR



GMP Biotinylated Human DLL4 Protein, His,Avitag (Cat. No. GMP-DL4H23) immobilized on CM5 Chip can bind Human NOTCH1 Protein, Fc Tag (Cat. No. NO1-H5255) with an affinity constant between 1.00 nM - 30.0 nM as determined in a SPR assay (Biacore 8K) (QC tested).

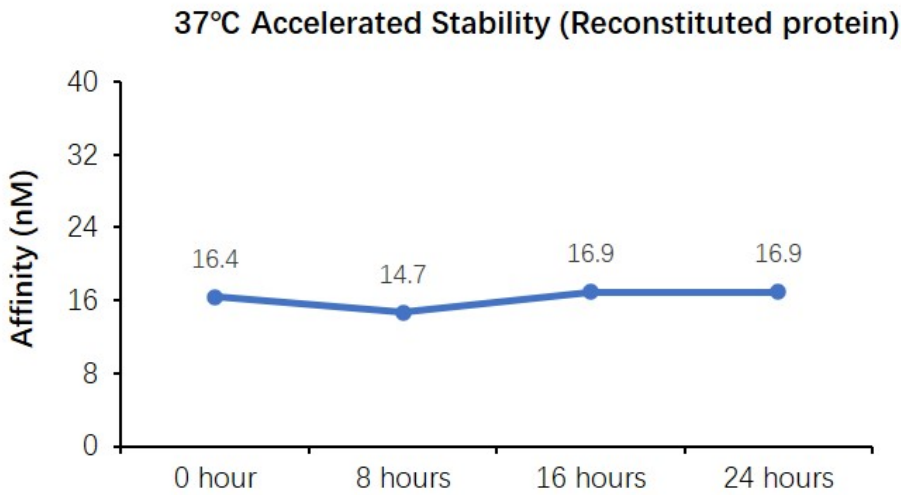
Application Data



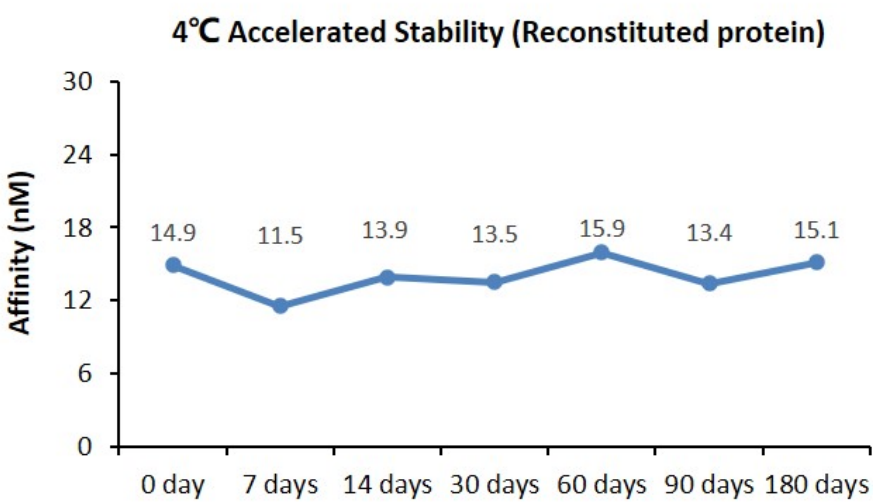
CD34⁺ CD45⁺ hematopoietic cells were seeded on GMP Biotinylated Human DLL4 Protein, His,Avitag (Cat. No. GMP-DL4H23) coated plates and differentiated for 14 days, then flow cytometry was used to detect the expression of T-cell progenitor markers, CD7 and CD5. The GMP Biotinylated Human DLL4 Protein, His,Avitag together with SCF, TPO, Flt3L and IL7, could induce the formation of CD7⁺ and CD7⁺ CD5⁺ T-cell progenitors (Routinely tested).

Bioactivity-Stability

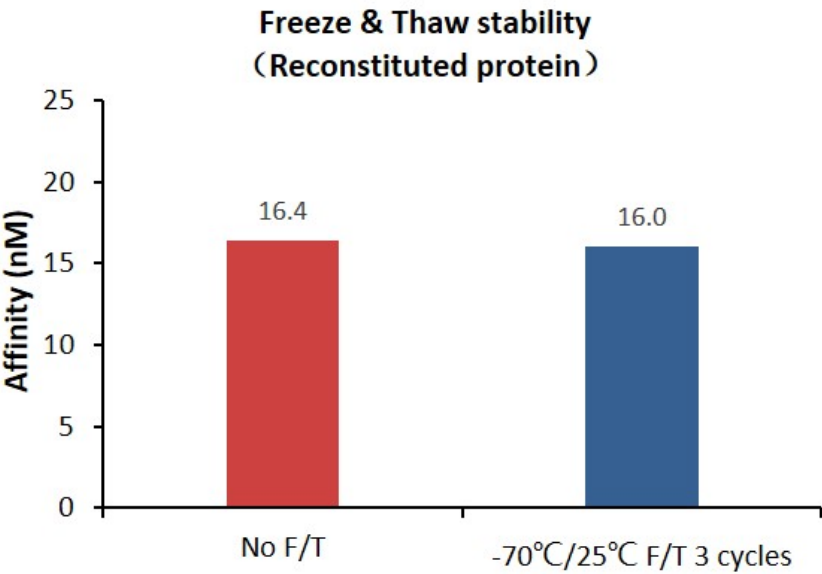




The SPR based assay shows that GMP Biotinylated Human DLL4 Protein, His,Avitag (Cat. No. GMP-DL4H23) is stable at 37°C for 24 hours.



The SPR based assay shows that GMP Biotinylated Human DLL4 Protein, His,Avitag (Cat. No. GMP-DL4H23) is stable at 4°C for 180 days.



The SPR based assay shows that GMP Biotinylated Human DLL4 Protein, His,Avitag (Cat. No. GMP-DL4H23) is stable after freezing and thawing 3 times.

MANUFACTURING SPECIFICATIONS

ACROBiosystems GMP grade products are produced under a quality management system and in compliance with relevant guidelines: Ph. Eur General Chapter 5.2.12 Raw materials of biological origin for the production of cell-based and gene therapy medicinal products; USP<92>Growth Factors and Cytokines Used in Cell Therapy Manufacturing; USP<1043>Ancillary Materials for Cell, Gene, and Tissue-Engineered Products; ISO/TS 20399-1:2018, Biotechnology - Ancillary Materials Present During the Production of Cellular Therapeutic Products.

ACROBiosystems Quality Management System Contents:

Designed under ISO 9001:2015 and ISO 13485:2016, Manufactured and QC tested under a GMP compliance factory

Animal-Free materials

Materials purchased from the approved suppliers by QA

ISO 5 clean rooms and automatic filling equipment

Qualified personnel

Quality-related documents review and approve by QA

Fully batch production and control records





- Equipment maintenance and calibration
- Validation of analytical procedures
- Stability studies conducted
- Comprehensive regulatory support files

Request For Regulatory Support Files (RSF)

ACROBiosystems provide rigorous quality control tests (fully validated equipment, processes and test methods) on our GMP grade products to ensure that they meet stringent standards in terms of purity, safety, activity and inter-batch stability, and each bulk QC lot mainly contains the following specific information:

- SDS-PAGE
- Protein content
- Endotoxin level
- Residual Host Cell DNA content
- Residual Host Cell Protein content
- Biological activity analysis
- Microbial testing
- Mycoplasma testing
- In vitro virus assay
- Residual moisture
- Batch-to-batch consistency

Background

Delta-like protein 4 (DLL4) is also known as Drosophila Delta homolog 4 (Delta4), which contains one DSL domain and eight EGF-like domains. DLL4 is expressed in vascular endothelium. DLL4 is involved in the Notch signaling pathway as Notch ligand, which can activates NOTCH1 and NOTCH4. DLL4 is involved in angiogenesis and negatively regulates endothelial cell proliferation and migration and angiogenic sprouting. DLL4 can bind to Notch-1 and Notch-4.

