

Product Information

SILu™ Lite SigmaMAb Bevacizumab
Monoclonal Antibody Standard
recombinant, expressed in CHO cells

Catalog Number **MSQC20**
Storage Temperature -20°C

Product Description

SILu™ Lite SigmaMAb Bevacizumab is a recombinant monoclonal antibody with a molecular mass of ~150 kDa expressed in CHO cells. SigmaMAb Bevacizumab is designed to be used as a standard for optimization of bioanalytical assays of Bevacizumab.

Each vial of SigmaMAb Bevacizumab contains 500 μg of lyophilized antibody from a solution of phosphate buffered saline. Vial content was determined by measuring A_{280} and using an extinction coefficient ($E^{0.1\%}$) of 1.4.

Sequence Information

SigmaMAb Bevacizumab Heavy Chain:

EVQLVESGGGLVQPGGSLRLSCAASGYTFTNYGMNWVRQAP
GKGLEWVGWINTYTGEPTYAADFKRRFTFSLDTSKSTAYLQ
MNSLRAEDTAVYYCAKYPHYYGSSHWYFDVWGQGLTVTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSW
NSGALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYI
CNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSV
FLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDG
VEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCK
VSNKALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQV
SLTCLVKGFIYPSDIAVEWESNGQPENNYKTTPVLDSDGSF
FLYSKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSP
G

SigmaMAb Bevacizumab Light Chain:

DIQMTQSPSSLSASVGDRVTITCSASQDISNYLNWYQQKPG
KAPKVLIIYFTSSLHSGVPSRFSGSGSGTDFTLTISLQPED
FATYYCQQYSTVPWTFGQGTKVEIKRTVAAPSVFIFPPSDE
QLKSGTASVCLLNNFYPREAKVQWKVDNALQSGNSQESVT
EQDSKDYSLSTLTLSKADYEKHKVYACEVTHQGLSSPV
TKSFNRGEC

Precautions and Disclaimer

This product is for R&D use only. Not for drug, household or other uses. Please consult the Safety Data Sheet for information regarding hazards and safe handling practices.

Preparation Instructions

Reconstitute the contents of the vial by adding 500 μL of ultrapure water or phosphate buffer, and mixing vigorously for a 1 mg/mL solution.

If the lyophilized powder does not dissolve completely, make the solution slightly acidic by adding 0.1% formic acid until complete dissolution is achieved. The resulting acidic solution should be neutralized to pH 6–7 by addition of a base or dilution into suitable buffer.

Note: Avoid PBS for reconstitution.

Storage/Stability

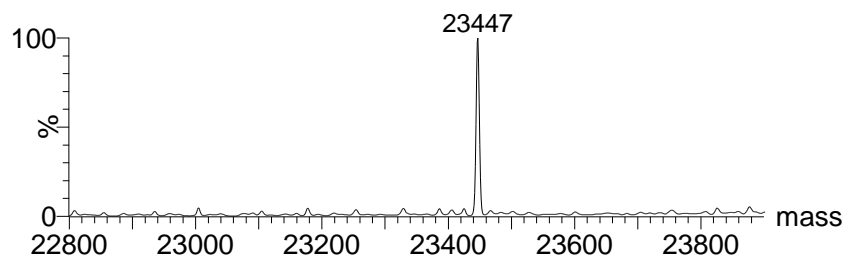
Store the lyophilized product at -20°C .

SILu is a trademark of Sigma-Aldrich Co. LLC.

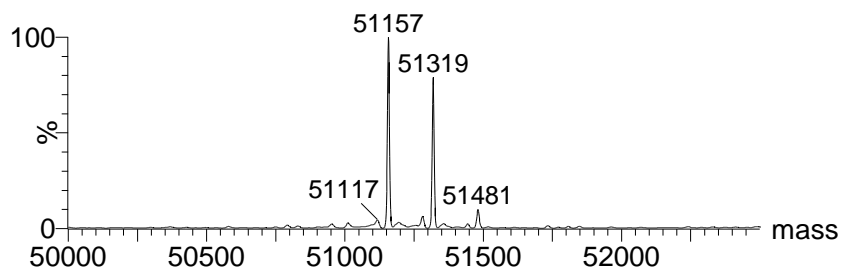
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Appendices
Figure 1.
Mass Spectra

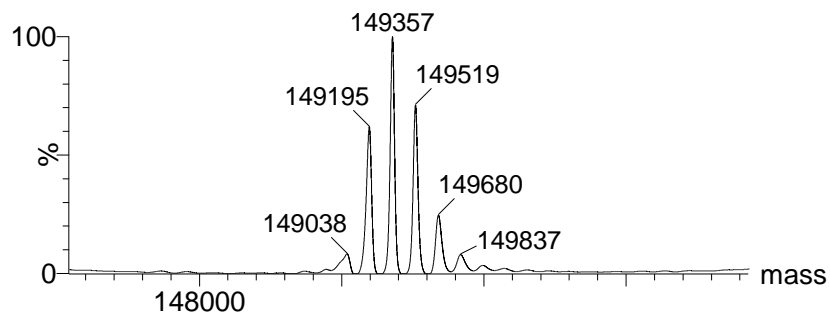
(a) Reduced Light Chain



(b) Reduced Heavy Chain



(c) Intact, non-reduced



Deconvoluted mass spectra of partially reduced (a) light chain, (b) heavy chain, and (c) intact SigmaMAb Bevacizumab. The reduction was performed in non-denaturing conditions, where the interchain disulfide bonds (which are more susceptible to reduction) will break and produce the light chain and heavy chains, while the intrachain disulfide bonds within each individual domain may remain intact.

Table 1.

The calculated molecular mass of light chains, heavy chains of fully reduced, and non-reduced (intact) SigmaMAb Bevacizumab with the most abundant glycoforms in this product.

Description	Composition	Modification*	Average Mass (Da)**	Disulfide bond***
Light chain, reduced	C ₁₀₃₄ H ₁₅₉₅ N ₂₇₃ O ₃₃₈ S ₆	NA	23,450.80	2 intra-chain
Heavy chain, reduced	C ₂₂₈₅ H ₃₅₀₁ N ₅₈₇ O ₇₁₆ S ₁₆	G0F	51,163.92	4 intra-chain
	C ₂₂₉₁ H ₃₅₁₁ N ₅₈₇ O ₇₂₁ S ₁₆	G1F	51,326.06	
	C ₂₂₉₇ H ₃₅₂₁ N ₅₈₇ O ₇₂₆ S ₁₆	G2F	51,488.20	
Native, intact product, non-reduced	C ₆₆₃₈ H ₁₀₁₆₀ N ₁₇₂₀ O ₂₁₀₈ S ₄₄	G0F + G0F	149,197.19	16 (12 intra-chain and 4 inter-chain)
	C ₆₆₄₄ H ₁₀₁₇₀ N ₁₇₂₀ O ₂₁₁₃ S ₄₄	G0F + G1F	149,359.34	
	C ₆₆₅₀ H ₁₀₁₈₀ N ₁₇₂₀ O ₂₁₁₈ S ₄₄	G1F + G1F	149,521.48	
	C ₆₆₅₆ H ₁₀₁₉₀ N ₁₇₂₀ O ₂₁₂₃ S ₄₄	G1F + G2F	149,683.62	
	C ₆₆₆₂ H ₁₀₂₀₀ N ₁₇₂₀ O ₂₁₂₈ S ₄₄	G2F + G2F	149,845.75	

G0F: GlcNAc₂Man₃GlcNAc₂Fuc

G1F: GlcNAc₂Man₃GlcNAc₂GalFuc

G2F: GlcNAc₂Man₃GlcNAc₂Gal₂Fuc

* C-terminal Lys removed from the sequence and accounted in the table

** Masses based on NIST Physical Reference Data

*** Intra disulfide bonds remain intact after partial reduction