

Product Information

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

Catalog Number **MSQC18**
Storage Temperature -20°C

Product Description

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

Each vial of SigmaMAb Cetuximab 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 Cetuximab Heavy Chain:

QVQLKQSGPGLVQPSSLSITCTVSGFSLTNYGVHWVRQSP
GKGLEWLGVIWSSGNTDYNTPFTSRLSINKDNSKSQVFFKM
NSLQSNDAIYYCARALTYDYEFAYWGQGLVTVSAASTK
GPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSGA
LTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNVN
HKPSNTKVDKRVEPKSCDKHTCPPECPAPELLGGPSVFLFP
PKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEVH
NAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSNK
ALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLTC
LVKGFYPSDIAVEWESNGQPENNYKTPPVLDSDGSFFLYS
KLTVDKSRWQQGNVFSVMSVHEALHNHYTQKSLSLSPG

SigmaMAb Cetuximab Light Chain:

DILLTQSPVILSVSPGERVSFSCRASQSIGTNIHWYQQRTN
GSPRLLIKYASESISGIPSRFSGSGSGTDFTLSINSVESED
IADYYCQQNNWPTTFGAGTKLELKRTVAAPSVFIFPPSDE
QLKSGTASVCLLNNFYPREAKVQWKVDNALQSGNSQESVT
EQDSKDYSLSSLTLSKADYEKHKVYACEVTHQGLSSPV
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.

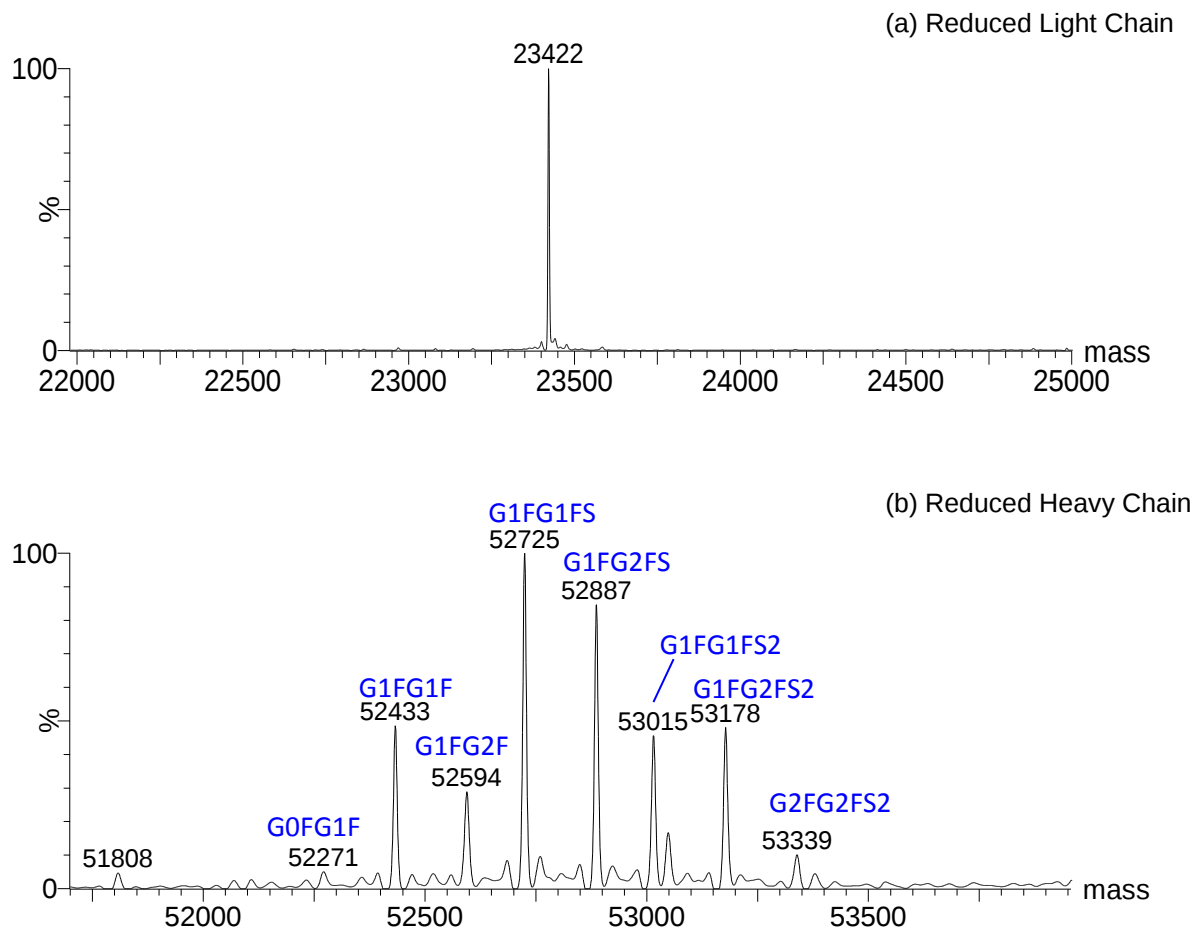
Storage/Stability

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



Deconvoluted mass spectra of partially reduced (a) light chain and (b) heavy chain SigmaMAb Cetuximab. 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 SigmaMAb Cetuximab with the most abundant glycoforms in this product

Description	Composition	Modification*	Average Mass (Da)**	Disulfide bond***
Light chain reduced	C ₁₀₂₅ H ₁₅₉₉ N ₂₈₁ O ₃₃₈ S ₅	NA	22,426.73	2 intra-chain
Heavy chain reduced	C ₂₂₀₂ H ₃₃₉₃ N ₅₇₉ O ₆₇₃ S ₁₅	PyroGlu	49226.07	4 intra-chain
	C ₂₃₁₄ H ₃₅₇₇ N ₅₈₇ O ₇₅₁ S ₁₅	PyroGlu, G0FG0F	52116.75	
	C ₂₃₂₀ H ₃₅₈₇ N ₅₈₇ O ₇₅₆ S ₁₅	PyroGlu, G0FG1F	52278.89	
	C ₂₃₂₆ H ₃₅₉₇ N ₅₈₇ O ₇₆₁ S ₁₅	PyroGlu, G1FG1F	52441.03	
	C ₂₃₃₂ H ₃₆₀₇ N ₅₈₇ O ₇₆₆ S ₁₅	PyroGlu, G1FG2F	52603.17	
	C ₂₃₃₇ H ₃₆₁₄ N ₅₈₈ O ₇₆₉ S ₁₅	PyroGlu, G1FG1FS	52732.29	
	C ₂₃₄₃ H ₃₆₂₄ N ₅₈₈ O ₇₇₄ S ₁₅	PyroGlu, G1FG2FS	52894.43	
	C ₂₃₄₈ H ₃₆₃₁ N ₅₈₉ O ₇₇₇ S ₁₅	PyroGlu, G1FG1FS2	53023.54	
	C ₂₃₅₄ H ₃₆₄₁ N ₅₈₉ O ₇₈₂ S ₁₅	PyroGlu, G1FG2FS2	53185.68	

G0F: GlcNAc₂Man₃GlcNAc₂Fuc

G1F: GlcNAc₂Man₃GlcNAc₂GalFuc

G2F: GlcNAc₂Man₃GlcNAc₂Gal₂Fuc

G1FS: GlcNAc₂Man₃GlcNAc₂GalFuc Neu5Ac1

G2FS: GlcNAc₂Man₃GlcNAc₂Gal₂Fuc Neu5Ac1

* 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