

Product Information

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

Catalog Number **MSQC22**
Storage Temperature -20°C

Product Description

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

Each vial of SigmaMAb Trastuzumab 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 Trastuzumab Heavy Chain:

EVQLVESGGGLVQPGGSLRLSCAASGFTNIKDTYIHWRQAP
GKGLEWVARIYPTNGYTRYADSVKGRFTISADTSKNTAYLQ
MNSLRAEDTAVYYCSRWGGDGFYAMDYWGQGLTVTVSSAST
KGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNSG
ALTSQVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICNV
NHKPSNTKVDKKVEPKSCDKHTCTPPCPAPELLGGPSVFLF
PPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEV
HNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSN
KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLT
CLVKGFYPSDIAVEWESNGQPENNYKTTTPVLDSDGSFFLY
SKLTVDKSRWQQGNVVFSCSVMEALHNHYTQKSLSLSPG

SigmaMAb Trastuzumab Light Chain:

DIQMTQSPSSLSASVGDRVTITCRASQDVNTAVAWYQQKPG
KAPKLLIYSASFLYSGVPSRFSRSGTDFTLTISLQPED
FATYYCQQHYTTPPTFGQGTKVEIKRTVAAPSVFIFPPSDE
QLKSGTASVCLLNNFYPREAKVQWKVDNALQSGNSQESVT
EQDSKDYSTLSSTLTLSKADYEKHKVYACEVTHQGLSSPV
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.

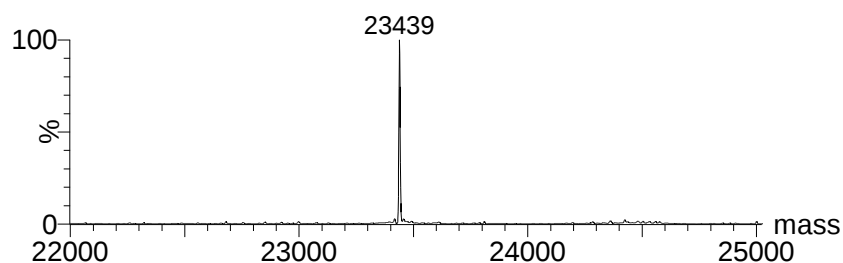
Storage/Stability

Store the lyophilized product at -20°C .

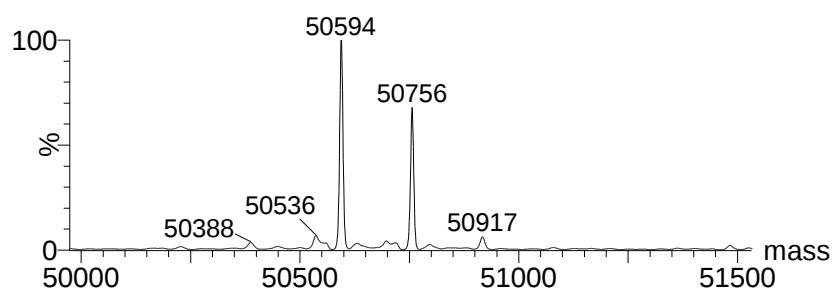
SILu is a trademark of Sigma-Aldrich Co. LLC.

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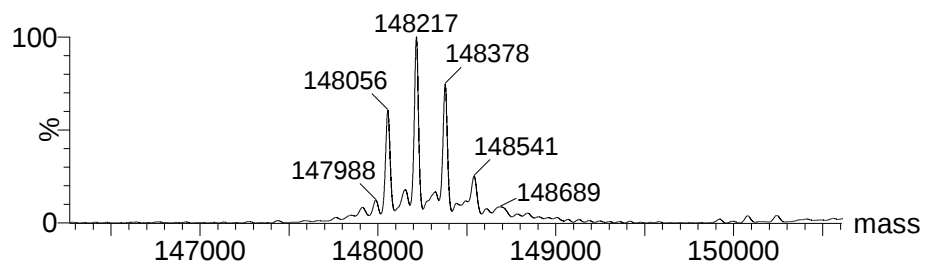
Appendices
Figure 1.
Mass Spectra



(a) Reduced Light Chain



(b) Reduced Heavy Chain



(c) Intact, non-reduced

Deconvoluted mass spectra of partial reduced (a) light chain, (b) heavy chain, and (c) intact SigmaMAb Trastuzumab. 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 Trastuzumab with the most abundant glycoforms in this product

Description	Composition	Modification*	Average Mass (Da)**	Disulfide bond***
Light chain, reduced	C ₁₀₃₂ H ₁₆₀₃ N ₂₇₇ O ₃₃₅ S ₆	NA	23,442.82	2 intra-chain
Heavy chain, reduced	C ₂₂₄₈ H ₃₄₇₉ N ₅₈₇ O ₇₁₀ S ₁₆	G0F	50,601.22	4 intra-chain
	C ₂₂₅₄ H ₃₄₈₉ N ₅₈₇ O ₇₁₅ S ₁₆	G1F	50,763.36	
	C ₂₂₆₀ H ₃₄₉₉ N ₅₈₇ O ₇₂₀ S ₁₆	G2F	50,925.51	
Native, intact product, non-reduced	C ₆₅₆₀ H ₁₀₁₃₂ N ₁₇₂₈ O ₂₀₉₀ S ₄₄	G0F + G0F	148,056.20	16 (12 intra-chain and 4 inter-chain)
	C ₆₅₆₆ H ₁₀₁₄₂ N ₁₇₂₈ O ₂₀₉₅ S ₄₄	G0F + G1F	148,218.34	
	C ₆₅₇₂ H ₁₀₁₅₂ N ₁₇₂₈ O ₂₁₀₀ S ₄₄	G1F + G1F	148,380.48	
	C ₆₅₇₈ H ₁₀₁₆₂ N ₁₇₂₈ O ₂₁₀₅ S ₄₄	G1F + G2F	148,542.62	
	C ₆₅₈₄ H ₁₀₁₇₂ N ₁₇₂₈ O ₂₁₁₀ S ₄₄	G2F + G2F	148,704.76	

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