

Product Information

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

Catalog Number **MSQC16**
Storage Temperature **-20 °C**

Product Description

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

Each vial of SigmaMAb Adalimumab contains 500 µg of antibody lyophilized 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 Adalimumab Heavy Chain:

EVQLVESGGGLVQPGGSLRLSCAASGFTFDDYAMHWVRQAP
GKGLEWVSAITWNSGHIDYADSVETRFTISRDNKNSLYLQ
MNSLRAEDTAVYYCAKVSYLSTASSLDYWGQGTLLTVSSAS
TKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNS
GALTSGVHTFPAVLQSSGLYSLSSVTVPSSSLGTQTYICN
VNHKPSNTKVDKKVEPKSCDKHTCTPPCPAPELLGGPSVFL
FPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVE
VHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKV
SKALPAPIEKTIKAKGQPREPKVYTLPPSRDELTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFL
YSKLTVDKSRWQQGNVSCFVSVMHEALHNHYTQKSLSLSPGK

SigmaMAb Adalimumab Light Chain:

DIQMTQSPSSLSASVGDRVTITCRASQGIRNYLAWYQQKPG
KAPKLLIYAASLTQSGVPSRFSGSGSGTDFTLTISSLQPED
VATYYCQRYNRAPYTFGQGTKVEIKRTVAAPSVFIFPPSDE
QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT

EQDSKDSTYSLSSSTLTLSKADYEKHKVYACEVTHQGLSSPV
TKSFNRGEC

Precautions and Disclaimer

For R&D use only. Not for drug, household, or other uses.

Preparation Instructions

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

Note: **Avoid PBS for reconstitution.**

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.

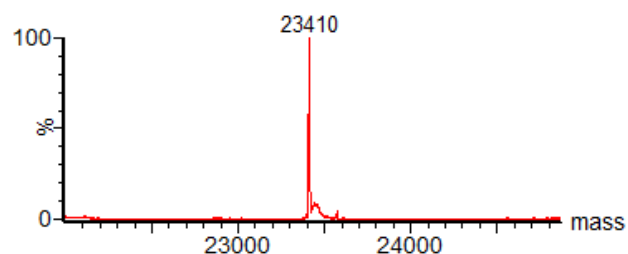
Storage/Stability

Store the lyophilized product at **-20 °C**.

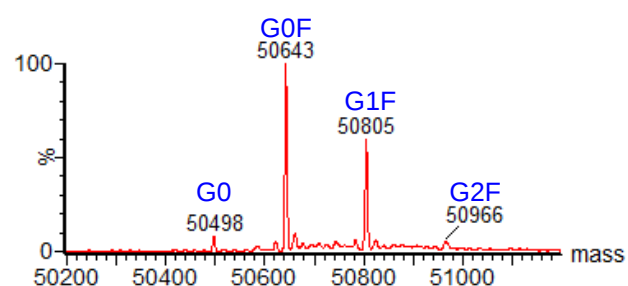
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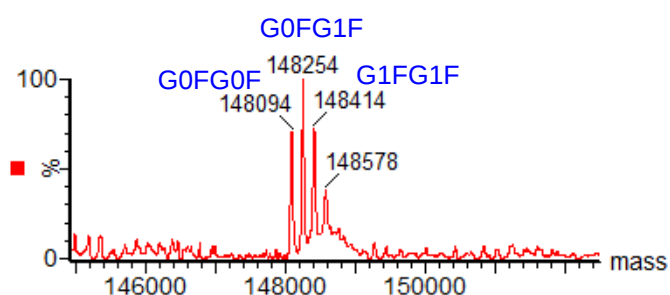
Appendices
Figure 1.
Mass spectra



(a) Light Chain, calculated mass: 23,412 Da



(b) Heavy Chain, calculated mass: 50,644 Da



(c) Intact of SigmaMAb Adalimumab, calculated mass: 148,080 Da

Deconvoluted mass spectra of (a) light chain, (b) heavy chain and (c) Intact of SigmaMAb Adalimumab. 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 intact, light chains, heavy chains of SigmaMAb Adalimumab with the most abundant Glycoforms.

Description	Composition	Modification	Avg. Mass (Da) *	Disulfide Bond
Light chain, Reduced	C ₁₀₂₇ H ₁₆₁₀ N ₂₈₂ O ₃₃₂ S ₆	NA	23411.91	2 intra-chain
Heavy chain, Reduced	C ₂₁₉₁ H ₃₃₉₂ N ₅₈₂ O ₆₇₇ S ₁₅	(-Lys)	49198.97	4 intra-chain
	C ₂₂₄₇ H ₃₄₈₄ N ₅₈₆ O ₇₁₆ S ₁₅	G0F (-Lys)	50644.31	
	C ₂₂₅₃ H ₃₄₉₄ N ₅₈₆ O ₇₂₁ S ₁₅	G1F (-Lys)	50806.45	
	C ₂₂₅₉ H ₃₅₀₄ N ₅₈₆ O ₇₂₆ S ₁₅	G2F (-Lys)	50968.59	
Native. Intact, Non-reduced	C ₆₄₃₆ H ₉₉₇₂ N ₁₇₂₈ O ₂₀₁₈ S ₄₂	(-2Lys)	145189.5	16 (12 intra chain and 4 inter chain)
	C ₆₅₄₈ H ₁₀₁₅₆ N ₁₇₃₆ O ₂₀₉₆ S ₄₂	G0F+G0F (-2Lys)	148080.2	
	C ₆₅₅₄ H ₁₀₁₆₆ N ₁₇₃₆ O ₂₁₀₁ S ₄₂	G0F+G1F (-2Lys)	148242.3	
	C ₆₅₆₀ H ₁₀₁₇₆ N ₁₇₃₆ O ₂₁₀₆ S ₄₂	G1F+G1F (-2Lys)	148404.5	
	C ₆₅₆₆ H ₁₀₁₈₆ N ₁₇₃₆ O ₂₁₁₁ S ₄₂	G1F+G2F (-2Lys)	148566.6	
	C ₆₅₇₂ H ₁₀₁₉₆ N ₁₇₃₆ O ₂₁₁₆ S ₄₂	G2F+G2F (-2Lys)	148728.7	

G0F: GlcNAc₂Man₃GlcNAc₂Fuc

G1F: GalGlcNAc₂Man₃GlcNAc₂Fuc

G2F: Gal₂GlcNAc₂Man₃GlcNAc₂Fuc

*Masses based on NIST Physical Reference Data