Product Information

SILu™Lite SigmaMAb Infliximab Monoclonal Antibody Standard

Recombinant, expressed in CHO cells

MSQC15

Storage Temperature -20 °C

Product Description

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

Each vial of SigmaMAb Infliximab 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 Infliximab Heavy Chain:

EVKLEESGGGLVQPGGSMKLSCVASGFIFSNHWMNWVRQ
SPEKGLEWVAEIRSKSINSATHYAESVKGRFTISRDDSKSA
VYLQMTDLRTEDTGVYYCSRNYYGSTYDYWGQGTTLTVSS
ASTKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSW
NSGALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYI
CNVNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPS
VFLFPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVD
GVEVHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYK
CKVSNKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKN
QVSLTCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSD
GSFFLYSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKS
LSLSPG

SigmaMAb Infliximab Light Chain:

DILLTQSPAILSVSPGERVSFSCRASQFVGSSIHWYQQRTN
GSPRLLIKYASESMSGIPSRFSGSGSGTDFTLSINTVESEDI
ADYYCQQSHSWPFTFGSGTNLEVKRTVAAPSVFIFPPSDE
QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQES
VTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLS
SPVTKSFNRGEC

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 µg of ultrapure water or phosphate buffer and mixing vigorously for a 1 mg/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.

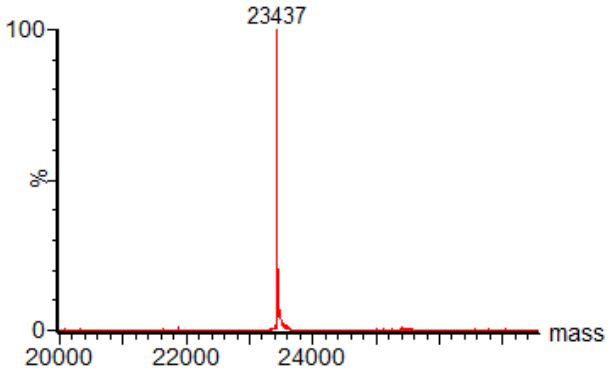
Storage/Stability

Store the lyophilized product at –20 °C.

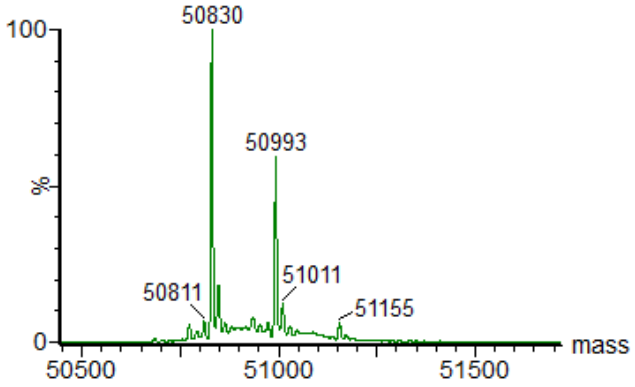
Appendices

Mass Spectra

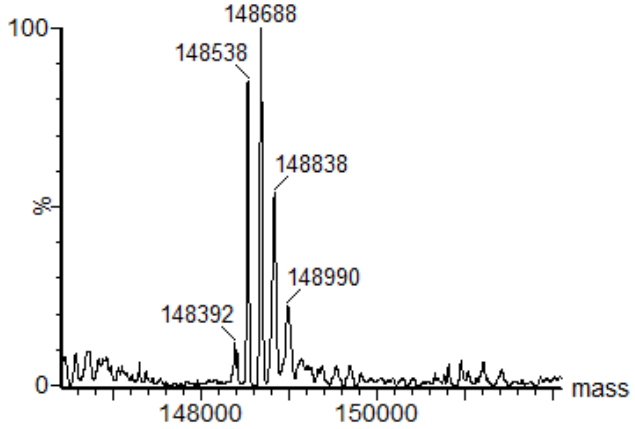
Deconvoluted mass spectra of (a) light chain, (b) heavy chain, and (c) Intact SigmaMAb Infliximab. The reduction was performed in non-denaturing conditions, where the interchain disulfide bonds (which are more susceptible to reduction) will break and produce the light chain and heavy chains, while the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



(a) Light Chain, calculated mass: 23,439 Da



(b) Heavy Chain, calculated mass: 50,833 Da



(c) Intact SigmaMAb Infliximab, calculated mass: 148,510 Da

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Table 1.

The calculated molecular mass of light chains, heavy chains of SigmaMAb Infliximab with the most abundant Glycoforms.

Description	Composition	Modification *	Avg. Mass (Da) **	Disulfide Bond ***
Light chain, Reduced	$C_{1028}H_{1587}N_{279}O_{337}S_6$	NA	23438.71	2 intra-chain
Heavy chain, Reduced	$C_{2197}H_{3399}N_{583}O_{681}S_{16}$	NA	49388.16	4 intra-chain
	$C_{2247}H_{3481}N_{587}O_{716}S_{16}$	G0	50687.35	
	$C_{2253}H_{3491}N_{587}O_{720}S_{16}$	G0F	50833.50	
	$C_{2259}H_{3501}N_{587}O_{725}S_{16}$	G1F	50995.64	
	$C_{2265}H_{3511}N_{587}O_{730}S_{16}$	G2F	51157.78	
Native. Intact product, non-reduced	$C_{6450}H_{9940}N_{1724}O_{2036}S_{44}$	NA	145621.5	16 (12 intra-chain and 4 inter-chain)
	$C_{6562}H_{10122}N_{1732}O_{2114}S_{44}$	G0F+G0F	148510.2	
	$C_{6568}H_{10132}N_{1732}O_{2119}S_{44}$	G0F+G1F	148672.3	
	$C_{6574}H_{10142}N_{1732}O_{2124}S_{44}$	G1F+G1F	148834.4	
	$C_{6580}H_{10152}N_{1732}O_{2129}S_{44}$	G1F+G2F	148996.6	
	$C_{6586}H_{10162}N_{1732}O_{2134}S_{44}$	G2F+G2F	149158.7	

G0F GlcNAc2Man3GlcNAc2Fuc

G1F: GalGlcNAc2Man3GlcNAc2Fuc

G2F: Gal2GlcNAc2Man3GlcNAc2Fuc

* 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

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