3050 Spruce Street, St. Louis, MO 63103 USA
Tel: (800) 521-8956 (314) 771-5765 Fax: (800) 325-5052 (314) 771-5757
email: techservice@sial.com sigma-aldrich.com

Product Information

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

Catalog Number **MSQC28**
Storage Temperature –20 °C

Product Description

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

Each vial of SigmaMAb Vedolizumab 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 Vedolizumab Heavy Chain:

QVQLVQSGAEVKKPGASVKVSCKGSGYTFTSYWMHWVRQAP
GQRLEWIGEIDPSESNTNYNQKFKGRVTLTVDISASTAYME
LSSLRSEDTAVYYCARGGYDGWDYAIDYWGQGTLVTVSSAS
TKGPSVFPLAPSSKSTSGGTAALGCLVKDYFPEPVTVSWNS
GALTSGVHTFPAVLQSSGLYSLSSVVTVPSSSLGTQTYICN
VNHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELAGAPSVFL
FPPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVE
VHNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVS
NKALPAPIEKTISKAKGQPREPQVYTLPPSRDELTKNQVSL
TCLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFL
YSKLTVDKSRWQQGNVFSCSVMHEALHNHYTQKSLSLSPG

SigmaMAb Vedolizumab Light Chain:

DVVMTQSPLSLPVTPGEPASISCRSSQSLAKSYGNTYLSWY
LQKPGQSPQLLIYGISNRFSGVPDRFSGSGSGTDFTLKISR
VEAEDVGVYYCLQGTHQPYTFGQGTKVEIKRTVAAPSVFIF
PPSDEQLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNS
QESVTEQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQ
GLSSPVTKSFNRGEC

Precautions and Disclaimer

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

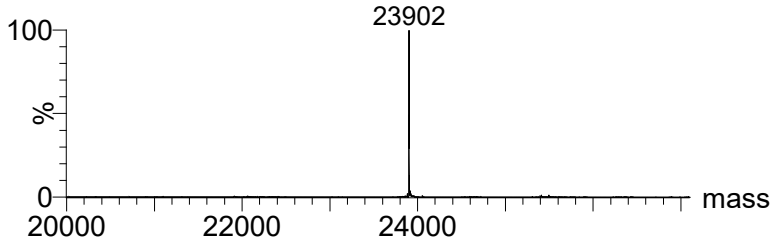
Reconstitute the contents of the vial by adding 500 μL of ultrapure water or phosphate buffer, and mixing vigorously for a 1 mg/mL solution.

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.**

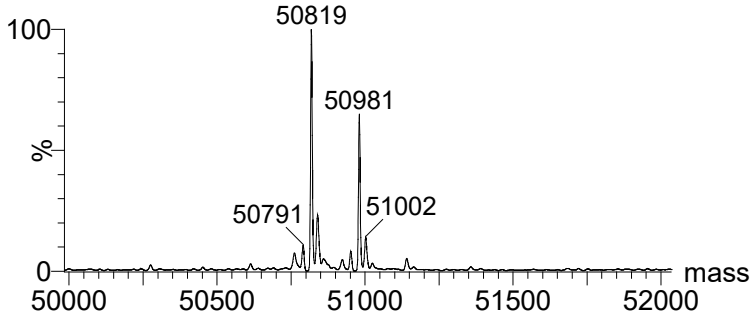
Storage/Stability

Store the lyophilized product at –20 °C.

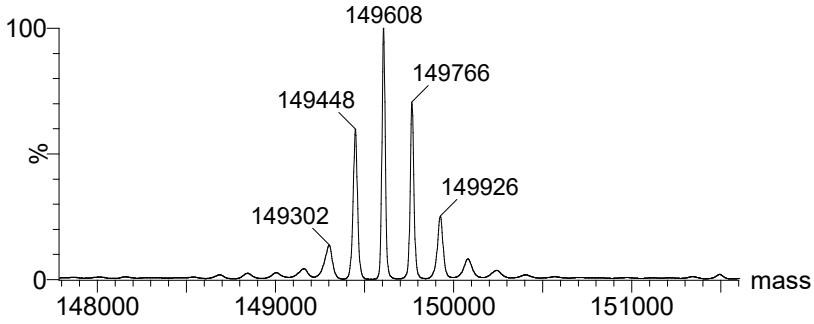
Appendices
Figure 1.
Mass Spectra



(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 Vedolizumab. 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 Vedolizumab with the most abundant glycoforms in this product.

Description	Composition	Modification*	Average Mass (Da)**	Disulfide bond***
Light chain, reduced	$C_{1055}H_{1640}N_{282}O_{340}S_6$	NA	23906.44	2 intra-chain
Heavy chain, reduced	$C_{2203}H_{3397}N_{581}O_{680}S_{15}$ $C_{2259}H_{3489}N_{585}O_{719}S_{15}$ $C_{2265}H_{3499}N_{585}O_{724}S_{15}$ $C_{2271}H_{3509}N_{585}O_{729}S_{15}$	PyroGlu G0F, PyroGlu G1F, PyroGlu G2F, PyroGlu	49382.13 50827.47 50989.61 51151.75	4 intra-chain
Native, intact product, non-reduced	$C_{6516}H_{10042}N_{1726}O_{2040}S_{42}$ $C_{6628}H_{10226}N_{1734}O_{2118}S_{42}$ $C_{6634}H_{10236}N_{1734}O_{2123}S_{42}$ $C_{6640}H_{10246}N_{1734}O_{2128}S_{42}$ $C_{6646}H_{10256}N_{1734}O_{2133}S_{42}$ $C_{6652}H_{10266}N_{1734}O_{2138}S_{42}$	2PyroGlu G0F + G0F, 2PyroGlu G0F + G1F, 2PyroGlu G1F + G1F, 2PyroGlu G1F + G2F, 2PyroGlu G2F + G2F, 2PyroGlu	146544.9 149435.6 149597.7 149759.8 149922.0 150084.1	16 (12 intra-chain and 4 inter-chain)

G0F: $GlcNAc_2Man_3GlcNAc_2Fuc$
G1F: $GlcNAc_2Man_3GlcNAc_2GalFuc$
G2F: $GlcNAc_2Man_3GlcNAc_2\ Gal_2Fuc$
* 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

PJ, CY 03/21-1