

Product Information

SILu™MAB Trastuzumab - Stable Isotope Labeled Monoclonal Antibody Standard

recombinant, expressed in CHO cells

Catalog Number **MSQC23**
Storage Temperature -20°C

Product Description

SILu™MAB Trastuzumab is a recombinant, stable isotope-labeled, monoclonal antibody which incorporates [$^{13}\text{C}_6$, $^{15}\text{N}_4$]-Arginine and [$^{13}\text{C}_6$, $^{15}\text{N}_2$]-Lysine. Expressed in CHO cells, SILu™MAB Trastuzumab is designed to be used as an internal standard for analysis of Trastuzumab in human serum.

Recommended surrogate peptide sequences are indicated in Table 1. Suggested MRM parameters are available for download in several formats on the product display page at www.sigmaaldrich.com.

Each vial of SILu™MAB Trastuzumab contains 100 μg of the labeled 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

SILu™MAB Trastuzumab Heavy Chain:

EVQLVESGGGLVQPGGSLRLSCAASGFTNIK**DTYIHWVR**QAP
GK**GLEWVAR**IYPTNGYTR**FTISADTSK**NTAYLQ
MNSLR AEDTAVYYCSRWGGDGFYAMDYWGQGTLVTVSSAST
KGPSVFPLAPSSKSTSGGTAAALGCLVKDYFPEPVTVSWNSG
ALTSGVHTFPAVLQSSGLYSLSSVTVPSSTSGTQTYICNV
NHKPSNTKVDKKVEPKSCDKTHTCPPCPAPELLGGPSVFLF
PPKPKDTLMISRTPEVTCVVVDVSHEDPEVKFNWYVDGVEV
HNAKTKPREEQYNSTYRVVSVLTVLHQDWLNGKEYKCKVSN
KALPAPIEKTISKAKGQPREPQVYTLPPSREEMTKNQVSLT
CLVKGFYPSDIAVEWESNGQPENNYKTTPPVLDSDGSFFLY
SKLTVDKSRWQQGNVFCFSVMHEALHNHYTQKSLSLSPG

Table 1.

Trastuzumab-specific peptide sequences liberated from SILu™MAB Trastuzumab by tryptic digest

Unique Peptide Sequence	Location
DTYIHWVR	Heavy chain
GLEWVAR	Heavy chain
IYPTNGYTR ^{1,2}	Heavy chain
FTISADTSK ^{1,2}	Heavy chain
LLIYSASFLYSGVPSR	Light chain

SILu™MAB Trastuzumab Light Chain:

DIQMTQSPSSLSASVGRVTITCRASQDVNTAVAWYQQKPG
KAPK**LLIYSASFLYSGVPSR**FSGSRSGTDFTLTISLQPED
FATYYCQQHYTTPPTFGQGTKVEIKRTVAAPSVFIFPPSDE
QLKSGTASVVCCLNNFYPREAKVQWKVDNALQSGNSQESVT
EQDSKDSTYSLSSLTLSKADYEKHKVYACEVTHQGLSPV
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

SILu™MAB Trastuzumab recovery is maximized when 0.1% formic acid is used for reconstitution of the lyophilized product. Reconstitution with other solvents may reduce recovery. Do not freeze after reconstitution.

1. Briefly centrifuge the vial at $10,000 \times g$ to collect the product at the bottom of the vial.
2. Add 500 μL of ultrapure water containing 0.1% formic acid to the vial.
3. Mix the contents by gently inverting the vial a minimum of 5 times.
4. Allow the vial to stand at room temperature for at least 15 minutes and repeat mixing by inversion.

Storage/Stability

Store the lyophilized product at -20°C .

References

1. Iwamoto, N., and Shimada, T., Regulated LC-MS/MS bioanalysis technology for therapeutic antibodies and Fc-fusion proteins using structure-indicated approach. *Drug Metabolism and Pharmacokinetics*, **34(1)**, 19–24 (2019).
2. Budhraj, R.H., et al., LC-MS/MS validation analysis of trastuzumab using dSIL approach for evaluating pharmacokinetics. *Molecules*, **21(11)**, 1–10 (2016).

Legal Information

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