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™MAb Nivolumab - Stable Isotope Labeled Monoclonal Antibody Standard
recombinant, expressed in CHO cells

Catalog Number **MSQC27**
Storage Temperature –20 °C

Product Description

SILu™MAb Nivolumab is a recombinant, stable isotope-labeled, monoclonal antibody which incorporates [$^{13}C_6$, $^{15}N_4$]-Arginine and [$^{13}C_6$, $^{15}N_2$]-Lysine. Expressed in CHO cells, SILu™MAb Nivolumab is designed to be used as an internal standard for analysis of Nivolumab 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 Nivolumab 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 Nivolumab Heavy Chain:

QVQLVESGGGVVQPGRSLRLDCK**ASGITFSNSGMHWVR**QAP
GKGLEWVAVIWYDGSKRYYADSVKGRFTISRDNSKNTLFLQ
MNSLRAEDTAVYYCATNDDYWGQGTLVTVSSASTKGPSVFP
LAPCSRSTSESTAALGCLVKDYFPEPVTVSWNSGALTSGVH
TFPAVLQSSGLYSLSSVVTVPSSSLGTKTYTCNVDHKPSNT
KVDKRVESKYGPPCPPCPAPEFLGGPSVFLFPPKPKDTLMI
SRTPEVTCVVVDVSQEDPEVQFNWYVDGVEVHNAKTKPREE
QFNSTYRVVSVLTVLHQDWLNGKEYKCKVSNKGLPSSIEKT
ISKAKGQPREPQVYTLPPSQEEMTKNQVSLTCLVKGFYPSD
IAVEWESNGQPENNYKTTPPVLDSDGSFFLYSRLTVDKSRW
QEGNVFSCSVMHEALHNHYTQKSLSLSLG

SILu™MAb Nivolumab Light Chain:

EIVLTQSPATLSLSPGERATLSCRASQSVSSYLAWYQQKPG
QAPRLLIYDASNRATGIPARFSGSGSGTDFTLTISSLEPED
FAVYYCQQSSNWPRTFGQGTKVEIKRTVAAPSVFIFPPSDE
QLKSGTASVVCLLNNFYPREAKVQWKVDNALQSGNSQESVT
EQDSKDSTYSLSSTLTLSKADYEKHKVYACEVTHQGLSSPV
TKSFNRGEC

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

SILu™MAb Nivolumab 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 × *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.

Table 1.
Nivolumab-specific peptide sequences liberated from SILu™MAb Nivolumab by tryptic digest

Unique Peptide Sequence	Location
ASGITFSNSGMHWV**R**	Heavy chain

Reference

1. Iwamoto, N., et al., Validated LC–MS/MS analysis of immune checkpoint inhibitor Nivolumab in human plasma using a Fab peptide-selective quantitation method: nano-surface and molecular-orientation limited(nSMOL) proteolysis. Journal of Chromatography B, 1023 (2016) 9–16.

Legal Information

Sold under license from DuPont, U.S. Patent No. 7,396,688. This product is licensed under U.S. Patent No. 7,396,688 and foreign counterparts from E. I. du Pont de Nemours and Company. The purchase of this product conveys to the buyer the nontransferable right to use the purchased amount of the product for research and development only, including services for a third party for consideration. The buyer cannot sell or otherwise transfer this product, its components or materials made using this product or its components to a third party. Information about licenses for excluded uses is available from: E. I. du Pont de Nemours and Company; Attn: Associate Director, Commercial Development; DuPont Experimental Station E268; 200 Powdermill Rd.; Wilmington, DE 19803; 1-877-881- 9787 (voice), 1-302-695-1437 (fax), licensing@dupont.com.

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

PJ, CY 03/21-1