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Product Information

SILu™Mab G - Stable Isotope Labeled Universal Monoclonal Antibody Glycan Standard Mouse IgG2b
recombinant, expressed in mouse hybridoma

Catalog Number **MSQC5**
Storage Temperature –20 °C

Product Description

SILu™Mab G is a recombinant, stable isotope-labeled, mouse monoclonal IgG2b antibody, which contains [^{15}N]-labeled glycans. SILuMab G is designed for qualitative and quantitative analysis of glycoprotein glycans, and can be applied to individual glycans or complex mixtures. SILuMab G is a suitable standard for monoclonal antibodies and for Fc-fusion therapeutics.

SILuMab G is generated from a mouse hybridoma line, and contains many of the typical glycans that are commonly observed on therapeutic mAbs. The principal glycans present in SILuMab G are F1A2, F1A2G1, F1A2G2, and A2G1. The amino acid sequence of the Fc region surrounding the glycosylation site is similar in antibodies from different species.[1] Thus the kinetics of glycan release are expected to be correspondingly similar between antibodies from different species.

Component

Each vial of SILuMab G contains labeled antibody in phosphate buffered saline, pH 7.5. Vial content was determined by measuring A_{280} and using an extinction coefficient ($E^{0.1\%}$) of 1.4.

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

SILuMab G should be stored in frozen aliquots. Further dilutions can be made in phosphate buffered saline.

Storage/Stability

Store the product at –20 °C.

Procedure

One general protocol for quantitating endogenous antibody glycans with SILuMab G is as follows:

1. Serum is diluted with bovine serum albumin solution (80 mg/mL), and SILuMab G is added to a final concentration of 0.2 mg/mL in each sample.
2. Serum IgGs and SILuMab are purified from other serum proteins using a protein G column.
3. N-glycans are released with PNGase F. The glycans are then derivatized by reductive amination with procainamide.
4. Sample clean-up is performed. The labeled N-glycans are separated and analyzed by LC/MS.

The relative ratios of the glycans are obtained by SRM detection of the analyte glycans. For quantitation,[2] the isotopically labeled glycans are used as internal standards.

References

1. Lazar, G.A., and Desjarlais, J.R., “Engineering the Antibody Fc Region for Optimal Effector Function”, in *Therapeutic Monoclonal Antibodies: From Bench to Clinic* (Z. An, ed.). John Wiley & Sons, Inc. (Hoboken, NJ), pp. 349-370 (2009).
2. Goldman, R., and Sanda, M., *Proteomics Clin. Appl.*, **9(1-2)**, 17-32 (2015).

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