

“MagQu” α -Synuclein Control Solution

REF CL-ASC-000TR Concentration L
CL-ASC-010TR Concentration H

RUO

MagQu

For Research Use Only

Intended Use

“MagQu” α -Synuclein Control Solution is used as a standard control for “MagQu” α -Synuclein IMR Reagent (MF-ASC-0060 or MF-ASC-006B).

Special instrumentation requirement

Magnetic Immunoassay Analyzer (XacPro-S)

Product Description

α -Synuclein (SNCA) is a presynaptic neuronal protein and is abundant in the human brain. α -Synuclein aggregates to form insoluble fibrils in pathological conditions characterized by Lewy bodies, such as Parkinson's disease (PD), dementia with Lewy bodies (DLB) and multiple system atrophy (MSA). These disorders are known as synucleinopathies. α -Synuclein is the primary structural component of Lewy body fibrils. Occasionally, Lewy bodies contain Tau protein; however, α -Synuclein and Tau constitute two distinctive subsets of filaments in the same inclusion bodies. α -Synuclein pathology is also found in both sporadic and familial cases with Alzheimer's disease.^{1, 2, 3}

Principles of Test

“MagQu” α -Synuclein Control Solution is used as a standard control for “MagQu” α -Synuclein IMR Reagent (MF-ASC-0060). The antibody conjugated on the surface of Fe_3O_4 magnetic particles (~ 50 nm) could bind with α -Synuclein and form clusters. With the increase of cluster, the signal of ac susceptibility (χ_{ac}) will decrease in the applied ac magnetic field. That is the principle of Immuno Magnetic Reduction (IMR). By measuring the reduction of χ_{ac} , we can quantify the α -Synuclein in the sample easily and accurately.^{4,5}

Storage & Stability

Storage the product at -15 to -30 °C. (5.0 to -22.0 °F)

Please refer to the detail expiration date on the product label

CAUTION: Do not use the product beyond the expiration date.

CAUTION: Avoid repeated freezing and thawing cycles.

Statement of Warnings



BIOHAZARD

All products or objects that come in contact with human or animal body fluids should be handled carefully, before and after cleaning, as if capable of transmitting infectious diseases. Wear facial protection, gloves, and protective clothing. Safety Data Sheet is available at www.magqu.com.

1. For research use only
2. Do not use the product if there is any precipitation.
3. Aliquot the product for first use. Avoid repeated freezing and thawing cycles.
4. Do not use the product beyond the expiration date.

5. Keep out of reach of children.
6. The disposal of the waste generated should follow the local rules.
7. If there is any problem about the product, please contact the MagQu Co. Ltd.

Use Direction

1. For use with the “MagQu” α -Synuclein IMR Reagent (MF-ASC-0060 or MF-ASC-006B) at room temperature (15 to 30 °C).
2. Use the product for each measurement.

Procedure

Materials required but not supplied

- Magnetic Immunoassay Analyzer (XacPro-S)
- “MagQu” α -Synuclein IMR Reagent (MF-ASC-0060 or MF-ASC-006B)
- Sample testing tubes
- Transfer pipettes





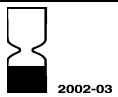


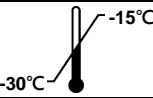




Thaw out the product on ice and then take it to room temperature (15 to 30 °C) before use. Mix the product thoroughly before use and then restore it at -15 to -30 °C as soon as possible.

1. Aliquot the product when first use. Avoid repeated freezing and thawing cycles.
2. Add 40 μL of “MagQu” α -Synuclein Control Solution into sample testing tube.
3. Add 80 μL of “MagQu” α -Synuclein IMR reagent (MF-ASC-0060 or MF-ASC-006B) into the same sample testing tube. Vortex for about 15 seconds to mix thoroughly.
4. Insert the sample testing tube into the measuring slot of Magnetic Immunoassay Analyzer (XacPro-S).
5. Process the measurement according to the operation & maintenance manual of Magnetic Immunoassay Analyzer (XacPro-S).
6. The final concentration value is acceptable while it falls between $\pm 20\%$ of the concentration value on COA.

References

1. Anzari Atik, Tessandra Stewart, Jing Zhang, “Alpha-synuclein as a biomarker for Parkinson's disease”, Brain Pathology, Volume 26, Issue 3, pages 410–418, May 2016
2. Oskar Hansson, Sara Hall, Annika Öhrfelt, Henrik Zetterberg, Kaj Blennow, Lennart Minthon, Katarina Nägga, Elisabet Londos, Shiji Varghese, Nour K Majbour, Abdulmonem Al-Hayani, Omar MA El-Agna, “Levels of cerebrospinal fluid α -Synuclein oligomers are increased in Parkinson's disease with dementia and dementia with Lewy bodies compared to Alzheimer's disease”, Hansson et al. Alzheimer's Research & Therapy, 2014, 6:25.
3. D.J. Irwin, V.M.Y. Lee, and J.Q. Trojanowski, “Parkinson's disease dementia convergence of α -Synuclein, tau and amyloid- β pathologies”, Nat Rev Neurosci., 14, 626–636, 2013.
4. C.Y. Hong, C.C. Wu, Y.C. Chiu, S.Y. Yang, H.E. Horng, H.C. Yang, “Magnetic susceptibility reduction method for magnetically labeled immunoassay”, Appl. Phys. Lett., 88, 212512-1–212512-3, 2006.
5. C.C. Yang, S.Y. Yang, C. S. Ho, et al, “Development of antibody functionalized magnetic nanoparticles for the immunoassay of

Glossary/symbol definition :

SYMBOL	DESCRIPTION
	Caution, refer to accompanying documents
	Batch code
	Catalogue number,
	Content
	Use by Expressed as: CCYY-MM-DD
	Biological risk
	Consult instructions for use.
	Temperature limitation
	For research use only
	Manufacturer
	Country and date of manufacture
	Do not use if package damaged



Manufacturer

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