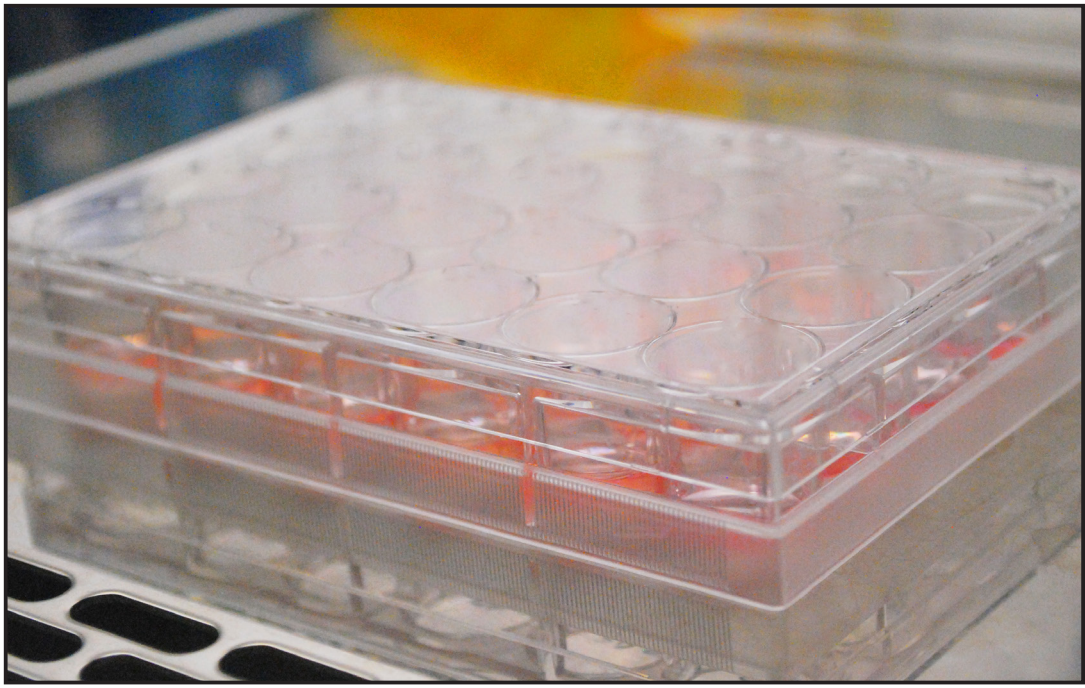
Product Insert



Exosome Standards

Lyophilized Exosome Standards from Cell culture supernatants

Lyophilized Exosome Standards from Human Biofluids

This product is for research use only.
It is highly recommended to read this users guide in its entirety prior to using this product.
Do not use this kit or its components beyond the indicated expiration date.

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PRODUCT INFORMATION

PRODUCT DESCRIPTION

About Exosomes

Exosomes are small endosome derived lipid nanoparticles (50-120 nm) actively secreted by exocytosis by most living cells. Exosome release occurs either constitutively or upon induction, under both normal and pathological conditions, in a dynamic, regulated and functionally relevant manner. Both amount and molecular composition of released exosomes depend on the state of a parent cell. Exosomes have been isolated from diverse cell lines (hematopoietic cells, tumor lines, primary cultures, virus infected cells) as well as from biological fluids in particular blood (e.g. serum and plasma from cancer patients) and other body fluids (bronchoalveolar lavage fluid, pleural effusions, synovial fluid, urine, amniotic fluid, semen, saliva etc). Exosomes have pleiotropic physiological and pathological functions and an emerging role in diverse pathological conditions such as cancer, infectious and neurodegenerative diseases.

Lyophilized Exosomes

Lyophilization is an ideal method for long-term storage of exosomes. It has proved to enable stability for long-term storage at +4°C. The exosome standards are available as a reference sample for multiple applications (FACS, WB, ELISA) and as calibration standard for quantitative comparison of different biological samples.

Lyophilized exosomes are easy to store and ship. The catalog of purifies lyophilized exosomes were obtained from different biological sources that includes exosomes from cell culture supernatant, human plasma and urine samples. The approach of isolation is a combination of ultracentrifugation and microfiltration procedures, and subsequently quantified/validated for overall protein content and particle number by NTA with Nanosight.

PRODUCT CONTENT

Types of Exosome Standards available:

- Lyophilized exosome standards from human Biofluids (plasma, serum, urine, saliva) of healthy donors.
- Lyophilized exosomes from cell culture supernatant (COLO1, MM1, BLCL21).

Content	Prepared in either 100 µg or 30 µg vials, sold in packages of 2, 4 or 6 vials
Expiration date	Lyophilized exosomes can be stored for 36 months at 4°C. Reconstituted exosome standards are not suitable for long term conservation at room temperature, use them within 2 hours after reconstitution. The remaining reconstituted standard stock solution should be aliquoted into polypropylene vials (preferably low binding) and stored at -20°C for up to one month or at -80°C for up to six months. Strictly avoid repeated freeze-and-thaw cycles.

PERFORMANCE AND CHARACTERISTICS

We have compared the effects of lyophilization on the preservation of exosomal proteins with respect to other storage methods such as storing fresh exosomes at -20°C and confirming their stability over 36 months at 4°C. We confirmed their performance using WB, FACS and ELISA (Refer to figures 2, 4, 5 and 6). The variability in the data was a result of the storage condition. Moreover, the exosome standards was utilized in running ELISAs, which ensured quantitative detection of markers of interest with a loss of signal with respect to fresh material (CV - 15%) (Refer to Figures 3 and 5).

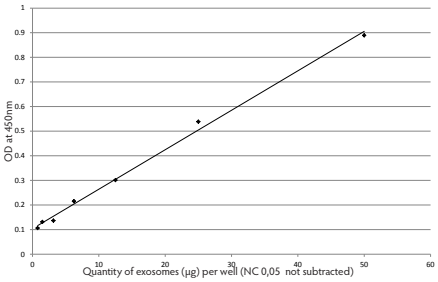

Figure 1: Titration of exosome standards purified from cell culture supernatant with CD63 detection.

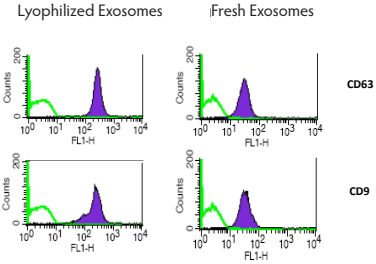

Figure 2: Comparison of exosomal markers on fresh and lyophilized exosomes.
FACS profiles of exosomes that were purified by differential centrifugation from human colon cancer cell line supernatant.

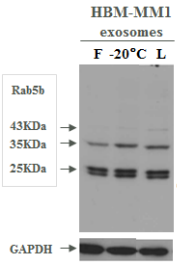

Figure 3: Western Blot comparison of exosomal markers on fresh (F), frozen (-20°C) and lyophilized exosomes (L)

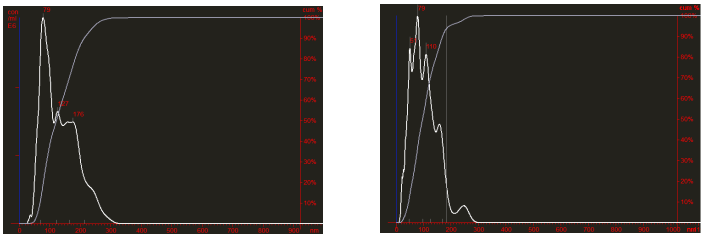

Figure 4: Comparative Nanosight analysis of freshly purified (left) and lyophilized plasma exosomes (right).

PROTOCOL

1. Reconstitute lyophilized exosome standard by adding 100 µl of deionized water, pipette the solution up and down 10-15 times, avoiding bubbles. Vortex the reconstituted standard for 60 seconds.

2. Briefly centrifuge the tubes containing the standard to ensure that the solution is collected at the bottom of the tube. Pipette the solution up and down 10 times, avoiding the introduction of bubbles. After this step, the standard is ready to use.

RELATED PRODUCTS

Overview

As the first company entirely dedicated to the field of exosomes, we offer a panel of kits and reagents for exosome research.
Ordering information on a variety of reagents and apparatus available from HansaBioMed is provided below. For more information, visit our website at www.exotest.eu.

Products	Quantity	Catalog Number
ExoTEST™ Ready To Use Kit for Overall Exosome capture and quantification from Biological fluids	Ready to Use Kit	HBM-RTK-POF/##
ExoTEST™ Ready To Use Kit for Overall Exosome capture and quantification from human Serum	Ready to Use Kit	HBM-RTK-POS/##
ExoTEST™ Ready To Use Kit for Overall Exosome capture and quantification from Cell culture supernatant	Ready to Use Kit	HBM-RTK-POC/##
ExoTEST™ Ready To Use Kit for Tumor-derived Exosome enrichment and quantification from Biological fluids	Ready to Use Kit	HBM-RTK-PTF/##
Custommade ExoTEST™ Ready to Use Kit	Ready to Use Kit	HBM-RTK-CMK
Exosome Total RNA Extraction Kit (Immunobeads, 10 or 20 Reactions)	Ready to Use Kit	HBM-RNA-BOF-##/#
Exosome Total RNA Extraction Kit (Immunoplate)	Ready to Use Kit	HBM-RNA-POF/#
Immunoplates for Overall Exosome capture from Biological fluids	96 wells plate	HBM-POF-##/##
Immunoplates for Overall Exosome capture from human Serum	96 wells plate	HBM-POS-##/##
Immunoplates for Overall Exosome capture from Cell culture supernatant	96 wells plate	HBM-POC-##/##
Immunoplates for Tumor-derived Exosome capture and enrichment from Biological fluids	96 wells plate	HBM-PTF-##/##
Immunoplates for Neural-derived Exosome capture and enrichment from Biological fluids	96 wells plate	HBM-PNF-##/##
Immunoplates for Glial-derived Exosome capture and enrichment from Biological fluids	96 wells plate	HBM-PGF-##/##
Immunoplates for Monocytes- and Platelets-derived Exosome capture and enrichment from Plasma samples	96 wells plate	HBM-PPP-##/##
Immunobeads for Overall Exosome capture from Biological fluids - 0.4, 1 or 4 microns immunobeads size - Simple or Covalent coating	10 or 20 reactions	HBM-BOLF-##/##
Immunobeads for Overall Exosome capture from Cell culture supernatant - 0.4, 1 or 4 microns immunobeads size- Simple or Covalent coating	10 or 20 reactions	HBM-BOLC-##/##
Immunobeads for Tumor-derived Exosome capture and enrichment from Biological fluids - 0.4, 1 or 4 microns immunobeads size - Simple or Covalent coating	10 or 20 reactions	HBM-BTLF-##/##

TECHNICAL SUPPORT

Get support

For the latest services and support information for all locations, go to www.exotest.eu

At the website, you can:

- Search for user documents, handbooks, certificates of analysis, citations, and other product support documents
- Access telephone and fax numbers to contact Technical Support and Sales facilities

Or contact us at info@exotest.eu

Material Safety Data Sheet (MSDS)

Material Safety Data Sheets (MSDSs) are available at
www.exotest.eu/index.php/documentation

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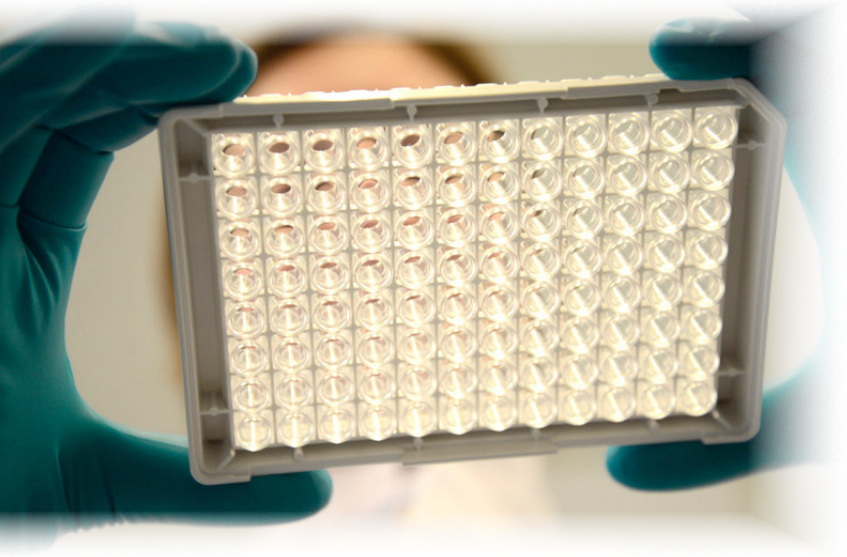
Research Use

All products are sold for research or laboratory use only and are not intended to be administered to humans or used for medical diagnostics.



For the latest product and technical information, visit hansabiomed.eu and exotest.eu

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