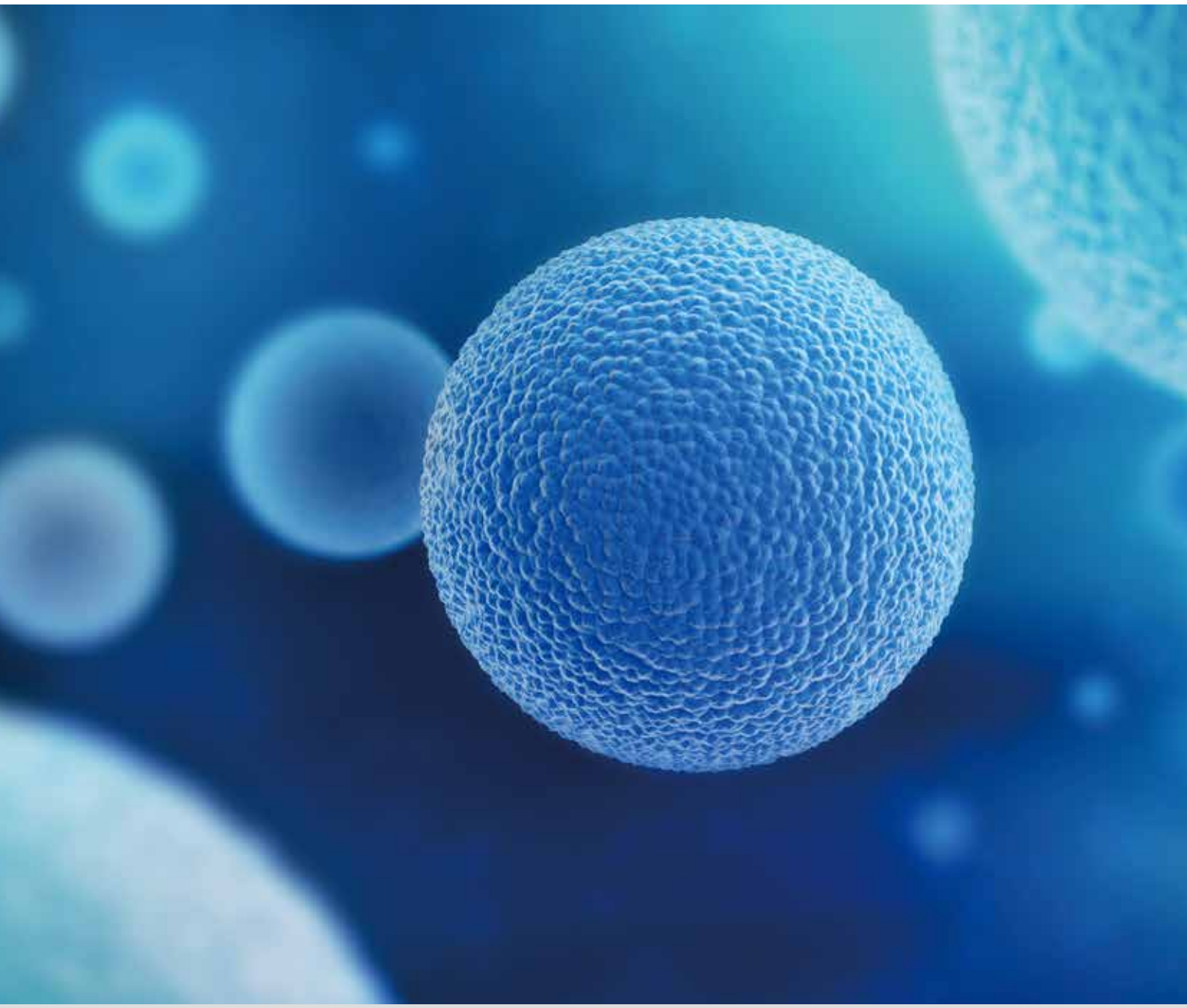
For Reseach Use Only

ExoCap™ Product Catalog

Research tools for extracellular vesicles



MEDICAL & BIOLOGICAL LABORATORIES CO., LTD.

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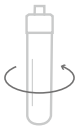
Product lineup

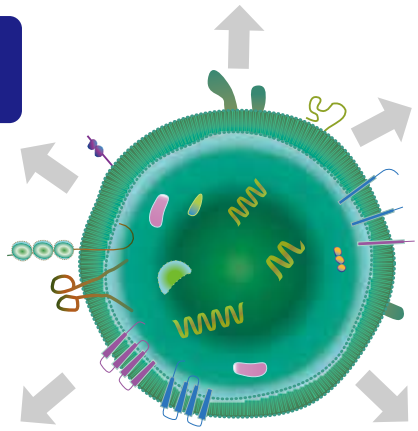
Improving exosome recovery rate from cell culture supernatant by ultracentrifugation



● ExoCap™ Ultracentrifugation/Storage Booster **P.3**

Purer exosome Isolation for your target molecule and assay

● ExoCap™ Streptavidin Kit **P.7**



Improving stability at 4°C storage for purified exosomes

● ExoCap™ Ultracentrifugation/ Storage Booster **P.3**

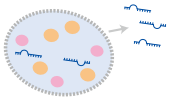
Monoclonal antibodies for common exosomal markers

● Antibodies for human exosomal markers **P.13**
- Anti-CD9 mAb
- Anti-CD63 (LAMP-3) mAb
- Anti-CD81 (TAPA1) mAb

Biotin, FITC, ALP-labeled antibodies are also available.

● ExoDiluent for Immunoassay **P.11**
Dilution buffer for exosome immunoassay

Nucleic acid isolation for exosomes



● ExoCap™ Nucleic Acid Elution Buffer **P.12**

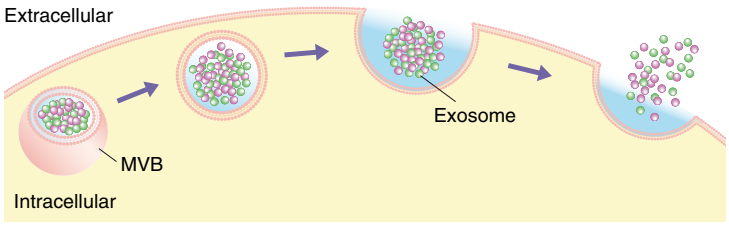
What are exosomes?

Exosomes are a type of extracellular vesicles (EVs) with a diameter of 30-100 nm. Exosomes are released from multivesicular bodies (MVBs) in the process of vesicle trafficking.

A family of proteins with four transmembrane domains, called tetraspanins, are highly expressed on (the surface of) exosomes. Tetraspanins such as CD9 and CD63 are commonly used exosomal markers. Exosomes also contain other proteins, lipids, and nucleic acids. After being secreted from the cell, exosomes are transported by body fluids such as the blood, urine, and saliva, and taken up by adjacent or distant tissues. Hence, exosomes are suggested to mediate intercellular signaling.

Due to the recent discovery that exosomes contain miRNAs, there is increasing interest in exosomal miRNA profiling to uncover cell-and tissue-specificity and association with disease. Currently, various studies are focused on exosomes in diseases such as cancer and aim to develop new diagnostic methods using molecules in exosomes, new drug targets, and an exosome-based drug delivery system.

MBL offers kits, antibodies, tools, and protocols for the isolation of exosomes as well as for characterization.



Comparison of exosome isolation method

	Ultracentrifugation	Affinity method (antibody)
Advantage	• Suitable for large scale • Absence of selection bias of surface marker	• Selectable of high purity of surface specific marker • High recovery rate
Disadvantage	• Expensive initial investment • Lower recovery rate • Non-selectable	• Potential for selection bias of surface marker • Unsuitable for large scale
Usage	• Comprehensive Analysis	• (Disease) specific marker analysis
Product	• ExoCap™ Ultracentrifugation/Storage Booster	• ExoCap™ Streptavidin Kit

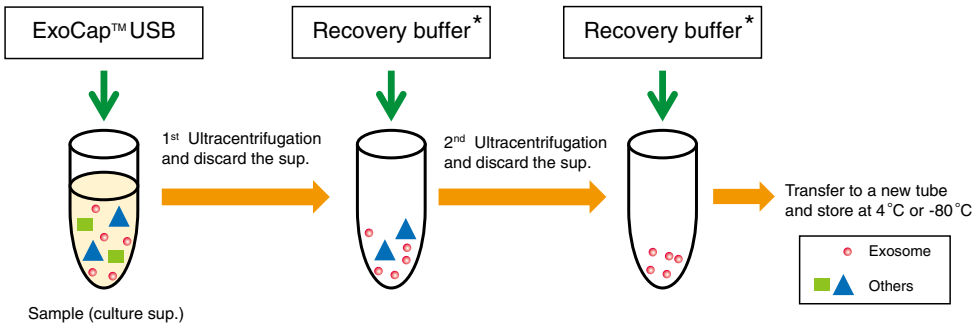
ExoCap™ Ultracentrifugation/Storage Booster (ExoCap™ USB)

◎Improve the recovery rate of exosomes from cell culture supernatant using ultracentrifugation
◎Increase stability using low temperature storage of purified exosomes

Exosomes and microvesicles are submicron extracellular vesicles that are secreted by various cell types. These vesicles contain various proteins, nucleic acids and molecular constituents to contribute to cell:cell communications. Currently, there are many different methods to collect exosomes. Ultracentrifugation is the most common isolation method used by most researchers. However, this method does have drawbacks, including reduced recovery ratio in cell culture supernatant. Another shortcoming involves storage temperature for isolated exosomes. Currently, storage is not stable at 4°C, which is a disadvantage for many researchers who may want to research the exosomes at a later time.

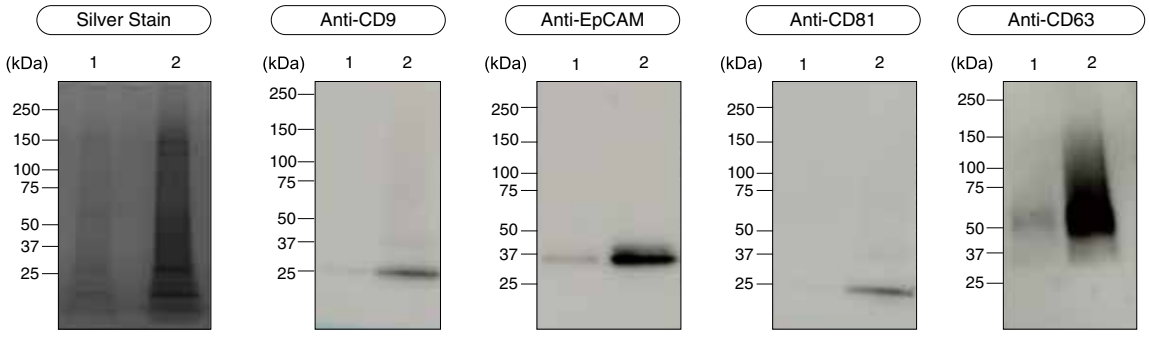
ExoCap™ Ultracentrifugation/Storage Booster reagent is available for efficient exosome purification by ultracentrifugation. It can be used as an additive to improve the recovery rate of exosomes in cultured supernatant. Furthermore, it can improve the storage stability of purified exosome under low temperature conditions.

Procedure Summary



*Recovery buffer : ExoCap™ USB : Ultrapure water=1 : 9

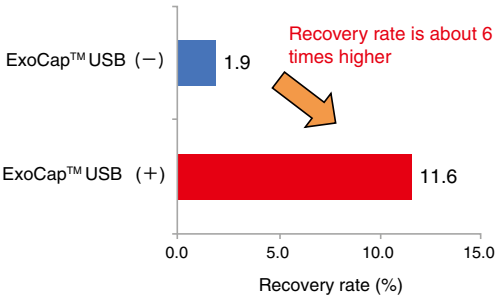
Evaluation of the ExoCap™ USB effect for ultracentrifugation by Western blotting (Non-reduced)

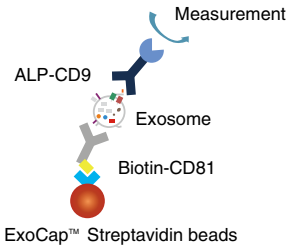


Lane 1: ExoCap™ USB (−)
Lane 2: ExoCap™ USB (+)

Exosomes were isolated from the supernatant by ultracentrifugation with/without ExoCap™ USB. The intensity of the bands of exosome markers with the ExoCap™ USB were denser than those without ExoCap™ USB, as a robust signal is seen in Lane 2 for each marker. Exosome recovery was boosted by using the ExoCap™ USB.

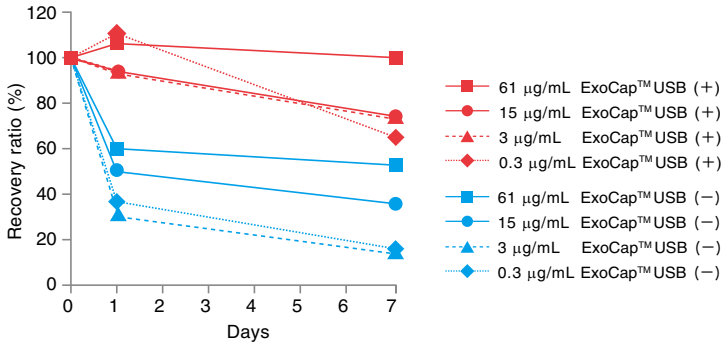
Evaluation of the ExoCap™ USB effect for Ultracentrifugation by CLEIA





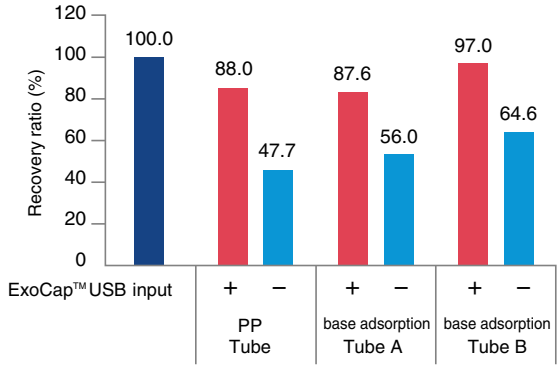
Exosome recovery rate was improved with the addition of ExoCap™ USB. For beads, CLEIA (Chemiluminescent Enzyme Immuno Assay) ExoCap™ Streptavidin Kits, biotinylated CD81 antibody and alkaline phosphatase (ALP) labeled CD9 antibody were used.

Stability for 7 days at 4 °C in regular polypropylene tube



The effect of the storage stability duration using ExoCap™ USB was evaluated. Purified exosomes were stored for 7 days at 4°C and evaluated using CLEIA. When ExoCap™ USB was added, the recovery ratio was higher than those where ExoCap™ USB was not used for all concentrations.

Stability at 4 °C in various polypropylene tubes



The effect of the storage stability using ExoCap™ USB was evaluated. Purified exosomes were overnight at 4°C and evaluated using CLEIA. When ExoCap™ USB was added, the recovery ratio was higher than those where ExoCap™ USB was not used.

Cellular uptake of fluorescent-labeled exosomes isolated by ultracentrifugation method with ExoCap™ USB

These data were kindly provided by Kyojiro Kawakami Ph.D, and Masafumi Ito M.D., Ph.D.,
(Research Team for Mechanism of Aging, Tokyo Metropolitan Institute of Gerontology.)

Experimental procedures

1. Isolation of exosomes

- Human castration-resistant prostate cancer PC-3 cells were cultured in Advanced RPMI 1640 Medium without FBS for 3 days.
- The cell culture supernatant was centrifuged at 2,000 x *g* for 10 minutes to eliminate cells followed by centrifugation at 12,000 x *g* for 30 minutes to discard cell debris.
  Then, the supernatant was filtered through 0.22 μm PVDF membrane.

Ultracentrifugation method

- Exosomes were pelleted by ultracentrifugation at 110,000 x *g* for 70 minutes and washed with PBS.
- After washing, pellets were re-suspended in PBS.

Ultracentrifugation method with ExoCap™ USB

- Prior to ultracentrifugation, ExoCap™ USB was added to the filtered sample at a final concentration of 10% according to the manufacture's instruction.
- Ultracentrifugation was performed as described in the left column. Pellets were washed with and re-suspended in ExoCap™ USB containing buffer.

2. Fluorescent labeling of cultured cells

- PC-3 cells were labeled by CellTracker™ Red (Thermo Fisher Scientific Inc.).

3. Fluorescent labeling of isolated exosomes and removal of excess fluorescent dyes

- Six micrograms of isolated exosomes were labeled by PKH67 (Sigma-Aldrich Co. LLC).
- Excess PKH67 that did not bind to exosomes was removed by ultrafiltration using Amicon® Ultra 50 kDa (Merck Millipore Corp.).
  For recovery of exosomes from filters, PBS was used for exosomes isolated by **ultracentrifugation** with PBS, while ExoCap™ USB containing buffer was used for exosomes isolated by **ultracentrifugation** with **ExoCap™ USB**.
- The protein concentration and fluorescent intensity were measured in each sample.

Results

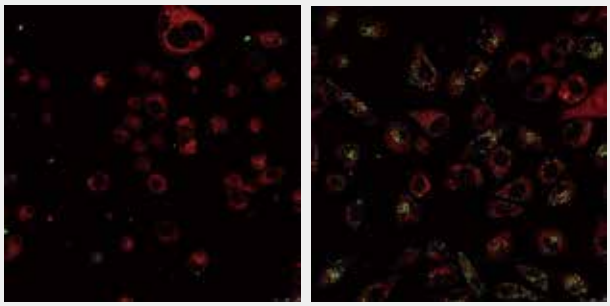
Exosome recovery after ultrafiltration

	Ultracentrifugation with PBS	Ultracentrifugation with ExoCap™ USB
Recovery rate of protein (Relative value)	**63.6% (1.0)**	**85.5% (1.3)**
Fluorescent intensity (Relative value)	**686,612 (1.0)**	**1,022,016 (1.5)**

Exosome uptake to cultured PC-3 cells

PKH67-labeled exosomes were added to the culture medium of PC-3 cells at a final concentration of 0.3 μg/100 μL. The cellular uptake of labeled exosomes was examined by fluorescence microscopy.

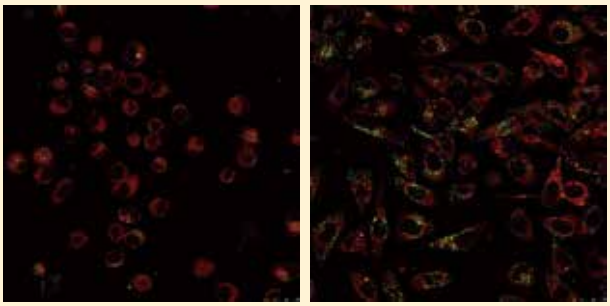
Ultracentrifugation with PBS



Uptake of exosomes to PC-3 cells after 5 h

Uptake of exosomes to PC-3 cells after 24 h

Ultracentrifugation with ExoCap™ USB



Uptake of exosomes to PC-3 cells after 5 h

Uptake of exosomes to PC-3 cells after 24 h

Conclusions

- The recovery of exosomes after ultrafiltration was improved by using ExoCap™ USB.
- Exosomes isolated by ultracentrifugation using ExoCap™ USB can be used for PKH67 labeling and cellular uptake experiments.

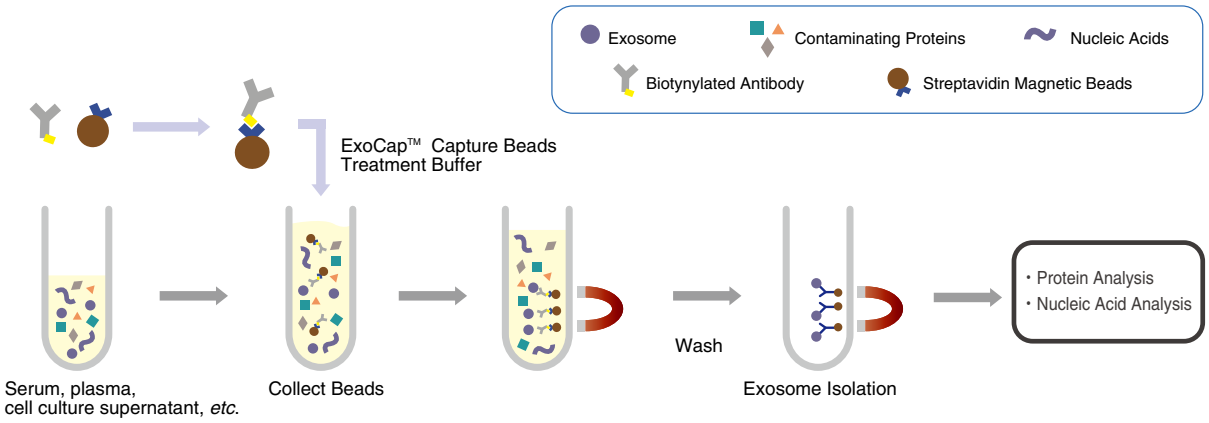
Code No.	Product name	Size
MEX-USB	ExoCap™ Ultracentrifugation/Storage Booster	50 mL

ExoCap™ Streptavidin Kit

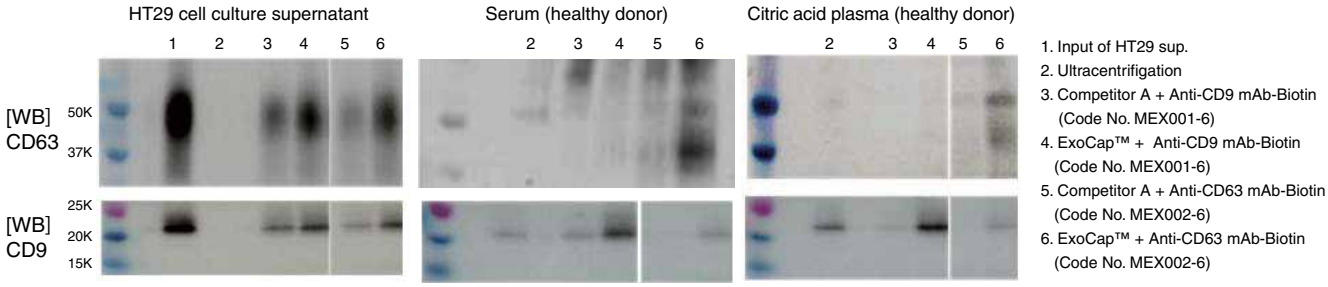
◎Flexible use of biotinylated antibodies to target exosomes
◎Lower non-specific binding by new "streptavidin magnetic beads" and buffers
◎Better yield than competitor magnetic beads
◎Easy to use

ExoCap™ Streptavidin Kit is designed for customized isolation and analysis of exosomes or microvesicles, called Extracellular Vesicles (EVs), using the researcher's biotinylated molecules such as antibodies against exosome surface marker proteins. ExoCap™ uses functionalized Magnosphere™, magnetic micro-particles coated with JSR Life Sciences proprietary hydrophilic polymer to decrease non-specific binding.

Procedure Summary



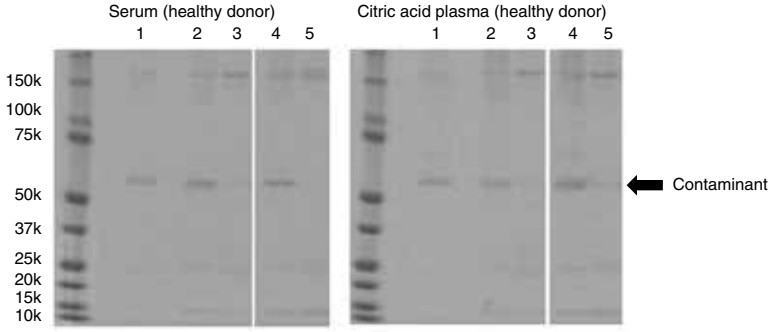
Western blotting



1. Input of HT29 sup.
2. Ultracentrifugation
3. Competitor A + Anti-CD9 mAb-Biotin (Code No. MEX001-6)
4. ExoCap™ + Anti-CD9 mAb-Biotin (Code No. MEX001-6)
5. Competitor A + Anti-CD63 mAb-Biotin (Code No. MEX002-6)
6. ExoCap™ + Anti-CD63 mAb-Biotin (Code No. MEX002-6)

Exosomes were isolated from various samples and analyzed by Western blotting. In each sample, stronger signal was observed with ExoCap™ compared to the ultracentrifugation method and competitive product A.

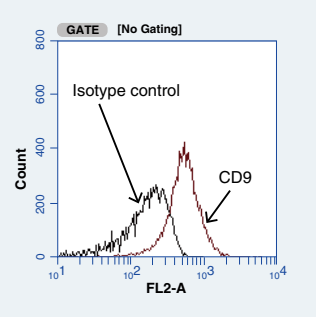
CBB staining (Detection of contaminants)

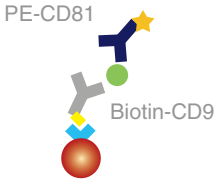


1. Ultracentrifugation method
2. Competitor A + Anti-CD9 mAb-Biotin (Code No. MEX001-6)
3. ExoCap™ + Anti-CD9 mAb-Biotin (Code No. MEX001-6)
4. Competitive Product A + Anti-EpCAM mAb-Biotin (Code No. MEX004-6)
5. ExoCap™ + Anti-EpCAM mAb-Biotin (Code No. MEX004-6)

Non-specific protein binding was lower with the ExoCap™ Streptavidin Kit compared to the competitive product.

Flow cytometry

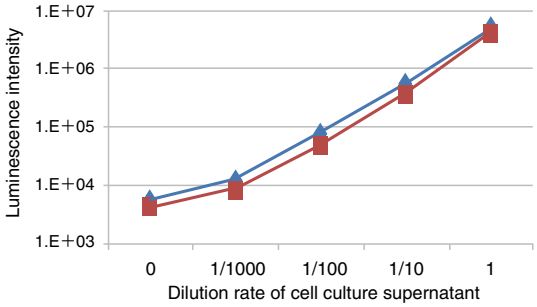




Sample: Citric acid plasma (healthy donor)
Capture: Biotin-CD9 mAb
Biotin-Isotype control
Detection: PE-CD81 mAb

ExoCap™ Streptavidin Kit shows the peak shift of flow cytometry.

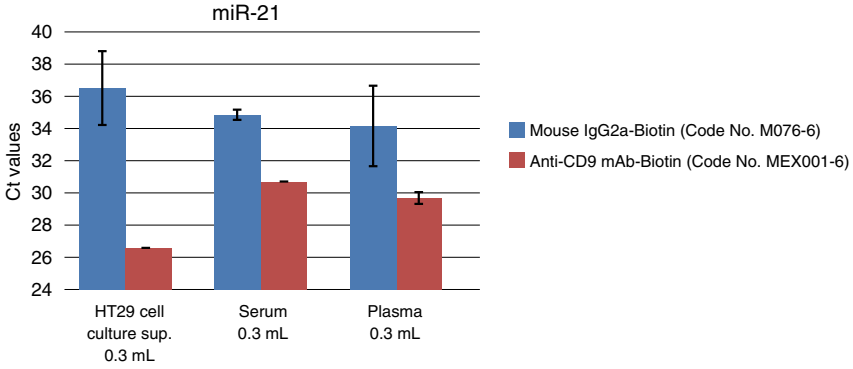
CLEIA



Sample: HT29 cell culture supernatant
Capture: Biotin-CD9 mAb (blue)
Biotin-CD63 mAb (red)
Detection: ALP-CD81 mAb

ExoCap™ Streptavidin Kit and MBL antibodies are able to be used for CLEIA application.

qRT-PCR



Exosomes were isolated using the ExoCap™ Streptavidin Kit (Code No. MEX-SA) and Anti-CD9 mAb-Biotin (Code No. MEX001-6) .Nucleic acids were purified using ExoCap™ Nucleic Acid Elution Buffer (Code No. MEX-E) and analyzed by qRT-PCR to detect miR-21.

Kit contents

- Streptavidin Magnetic Beads 2 mL
- Washing/Dilution Buffer 60 mL
- Treatment Buffer 30 mL
- User manual

Code No.	Product name	Size
MEX-SA	ExoCap™ Streptavidin Kit	1 Kit

Related Products

Code No.	Product name	Clone	Isotype	Applications	Cross reactivity	Size
MEX001-6	Anti-CD9 mAb-Biotin	A100-4	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX002-6	Anti-CD63 (LAMP-3) mAb-Biotin	C047-1	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX003-6	Anti-CD81 (TAPA1) mAb-Biotin	A103-10	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX004-6	Anti-CD326 (EpCAM) mAb-Biotin	B8-4	Mouse IgG1κ	FCM, ELISA	Human	50 μg/50 μL
M075-6	Mouse IgG1 (isotype control)-Biotin	2E12	Mouse IgG1κ	FCM	-	50 μg/50 μL
M076-6	Mouse IgG2a (isotype control)-Biotin	6H3	Mouse IgG2aκ	FCM	-	50 μg/50 μL
M077-6	Mouse IgG2b (isotype control)-Biotin	3D12	Mouse IgG2aκ	FCM	-	50 μg/50 μL
M078-6	Mouse IgG3 (isotype control)-Biotin	6A3	Mouse IgG3	-	-	50 μg/50 μL
3190	Magnetic Rack	-	-	-	-	1 unit (1.5 mL x 8 tubes)

WB: Western blotting , FCM: Flow cytometry

ExoCap™ Streptavidin CD9/CD63/CD81 Set

◎ExoCap™ Streptavidin Kit and Biotinylated CD9/CD63/CD81 antibodies are aveilable in a package.

Product contents

ExoCap™ Streptavidin Kit

- Streptavidin Magnetic Beads 2 mL
- Washing/Dilution Buffer 60 mL
- Treatment Buffer 30 mL
- User manual

+

Biotinylated antibodies against the exosome surface antigens (CD9, CD63, and CD81)

Exosome CD9/CD63/CD81 mAb Set-Biotin

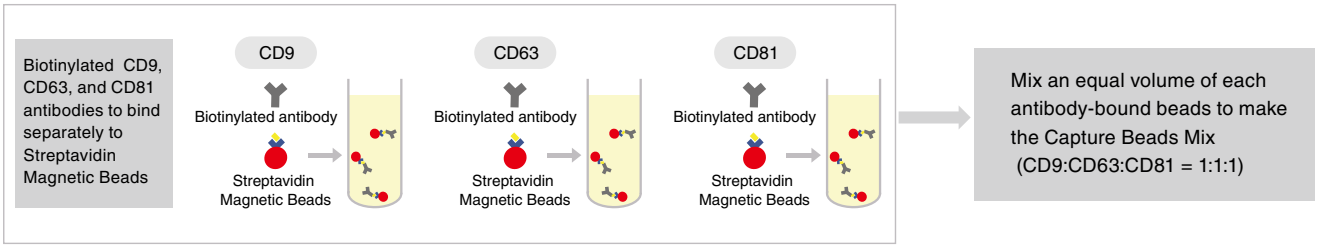
- Anti-CD9 mAb-Biotin (10 μg/50 μL)
- Anti-CD63 (LAMP-3) mAb-Biotin (10 μg/50 μL)
- Anti-CD81 (TAPA1) mAb-Biotin (10 μg/50 μL)
- User manual

Biotinylated antibodies to CD9, CD63, and CD81 are highly specific and perform excellently in exosome isolation by immunoprecipitation.

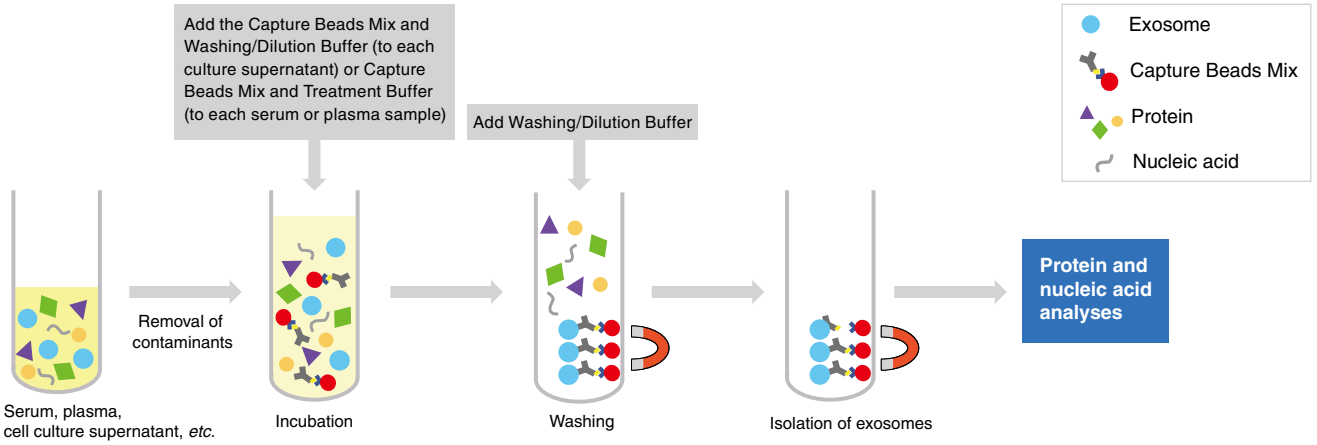
The ExoCap™ Streptavidin Kit consists of streptavidin-immobilized magnetic beads (Magnosphere™) and buffer solutions for capturing, washing, and extracting exosomes. The Magnosphere™ is coated with a JSR Life Sciences Corporation proprietary hydrophilic polymer to decrease non-specific binding. It has been used in in vitro diagnostic use. You can isolate exosomes in high-purity by using it together with our original biotinylated specific antibodies to CD9, CD63, and CD81.

Procedure Summary

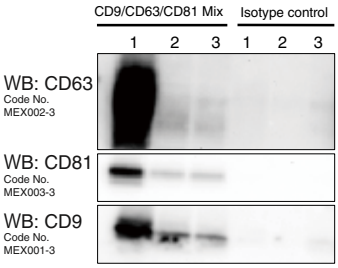
(1) Preparation of Capture Beads Mix



(2) Isolation of exosomes



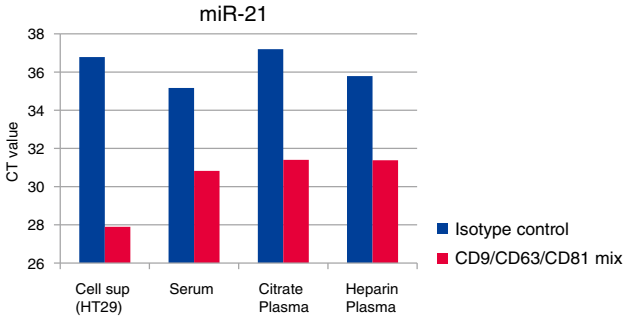
Western blotting



Lane 1 : HT-29 cell supernatant
Lane 2 : Serum healthy donor
Lane 3 : Citrate plasma healthy donor

After allowing the biotinylated CD9, CD63, and CD81 antibodies to bind separately to Streptavidin Magnetic Beads, an equal volume of each antibody-bound beads was mixed together (CD9/CD63/CD81 Mix). Using the mixed beads, exosomes were isolated from each sample and subjected to Western blot analysis.

qRT-PCR



After allowing the biotinylated CD9, CD63, and CD81 antibodies to bind separately to Streptavidin Magnetic Beads, an equal volume of each antibody-bound beads was mixed together (CD9/CD63/CD81 Mix). Using the mixed beads, exosomes were isolated from each sample. Nucleic acid was purified with ExoCap™ Nucleic Acid Elution Buffer (Code No. MEX-E) and subjected to qRT-PCR to detect miR-21.

Code No.	Product name	Size
MEX-SA123	ExoCap™ Streptavidin CD9/CD63/CD81 Set	1 Set

Related Products

Code No.	Product name	Clone	Isotype	Applications	Cross reactivity	Size
MEX-SA	ExoCap™ Streptavidin Kit	-	-	-	-	1 Kit
MEX001-6	Anti-CD9 mAb-Biotin	A100-4	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX002-6	Anti-CD63 (LAMP-3) mAb-Biotin	C047-1	Mouse IgG2bκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX003-6	Anti-CD81 (TAPA1) mAb-Biotin	A103-10	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX004-6	Anti-CD326 (EpCAM) mAb-Biotin	B8-4	Mouse IgG1κ	FCM, ELISA	Human	50 μg/50 μL

WB: Western blotting , FCM: Flow cytometry

ExoDiluent for Immunoassay

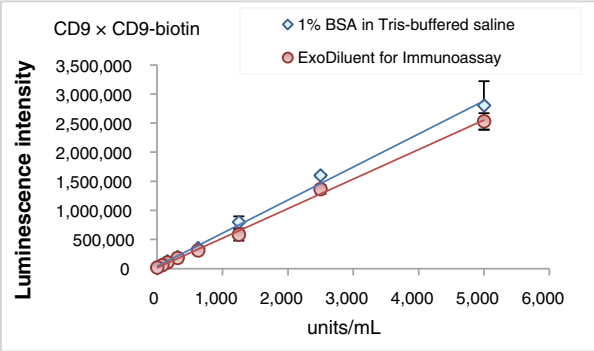
◎Improve the signal, signal-to-noise ratio and dilution linearity of ELISA/CLEIA using blood samples

"ExoDiluent for Immunoassay" is an optimized dilution buffer to efficiently measure the microvesicle or exosome (sometimes called Extracellular Vesicle (EV)) levels in blood samples, especially serum.

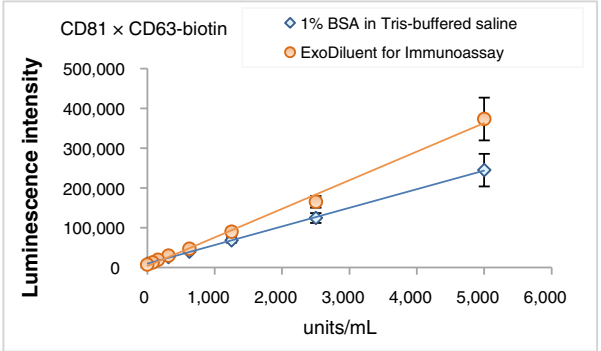
This reagent could result in improvement of the signal, signal-to-noise ratio and dilution linearity by attenuating the influence of blood-derived inhibitory components when the exosome/EV levels in serum are measured by immunoassay-based techniques such as sandwich ELISA (enzyme-linked immunosorbent assay) and CLEIA (chemiluminescence enzyme immunoassay) in combination with this diluent.

Standard/Calibration curve with HeLa-derived exosomes prepared by ultracentrifugation (UC)

* This assay was done in duplicate and the data point represents mean and standard deviation



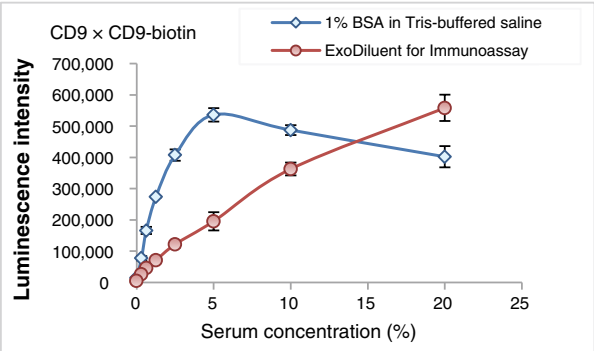
Capture Ab: Anti-CD9 mAb (Code No. MEX001-3)
Detection Ab: Anti-CD9 mAb-Biotin (Code No. MEX001-6)



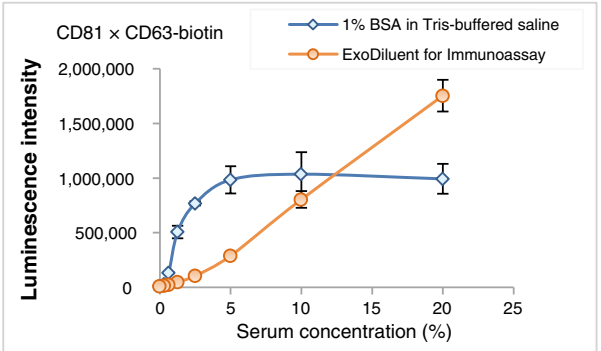
Capture Ab: Anti-CD81 mAb (Code No. MEX003-3)
Detection Ab: Anti-CD63 mAb-Biotin (Code No. MEX002-6)

Detection of circulating exosomes/EVs in pooled human serum from healthy volunteers

* This assay was done in duplicate and the data point represents mean and standard deviation



Capture Ab: Anti-CD9 mAb (Code No. MEX001-3)
Detection Ab: Anti-CD9 mAb-Biotin (Code No. MEX001-6)



Capture Ab: Anti-CD81 mAb (Code No. MEX003-3)
Detection Ab: Anti-CD63 mAb-Biotin (Code No. MEX002-6)

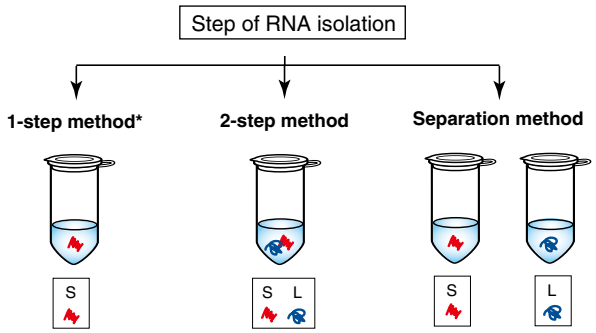
Code No.	Product name	Size
MEX1001	ExoDiluent for Immunoassay	50 mL

ExoCap™ Nucleic Acid Elution Buffer

◎Enable to isolate nuclec acids from extracellular vesicles in one tube or in two tubes separately
◎High quality, high yield
◎Eco-friendly

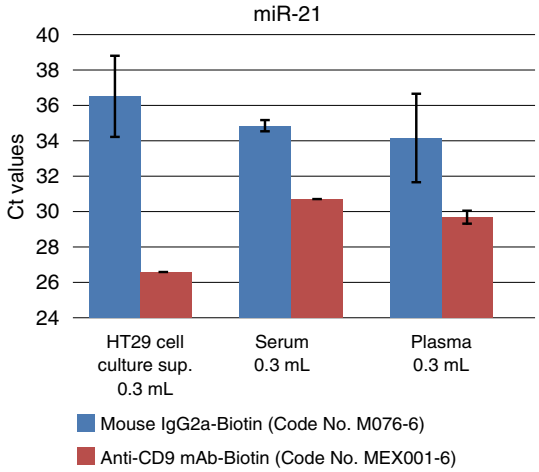
ExoCap™ Nucleic Acid Elution Buffer is optimized to isolate nucleic acids from immunopurified materials, exosomes bound to ExoCap™ Capture Beads especially. This reagent is also available for Extracellular vesicles (EVs) research: all of the known EV isolation methods, such as ultracentrifugation, antibody/reagent-based precipitation and size exclusion, can be followed by this kit. The extraction procedure requires neither filtration step nor phenol-chloroform extraction step. This method allows us to achieve a high nucleic acids recovery rate with good quality. There are three methods to isolate large RNAs and/or small RNAs. Select the best way which is suitable for your following analysis.

Step of RNA isolation



*This is not suitable for isolating large RNAs because the recovery for large RNAs is inefficient compared with the other 2 methods.

qRT-PCR



Exosomes were isolated using the ExoCap™ Streptavidin Kit (Code No. MEX-SA) and Anti-CD9 mAb-Biotin (Code No. MEX001-6) .Nucleic acids were purified using ExoCap™ Nucleic Acid Elution Buffer (Code No. MEX-E) and analyzed by qRT-PCR to detect miR-21.

Product contents

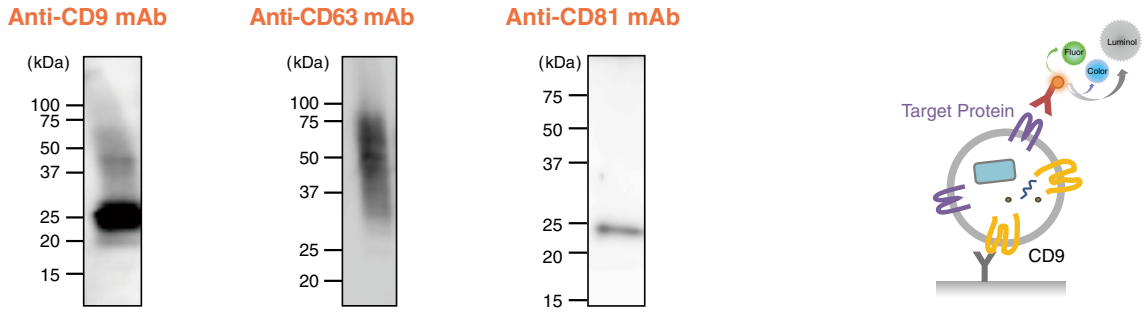
- Nucleic Acid Elution Buffer 1 0.26 mL
- Nucleic Acid Elution Buffer 2 6 mL
- Nucleic Acid Elution Buffer 3 4 mL
- Nucleic Acid Elution Buffer 4 0.2 mL

Code No.	Product name	Size
MEX-E	ExoCap™ Nucleic Acid Elution Buffer	20 assays

Antibodies for human exosomal common markers

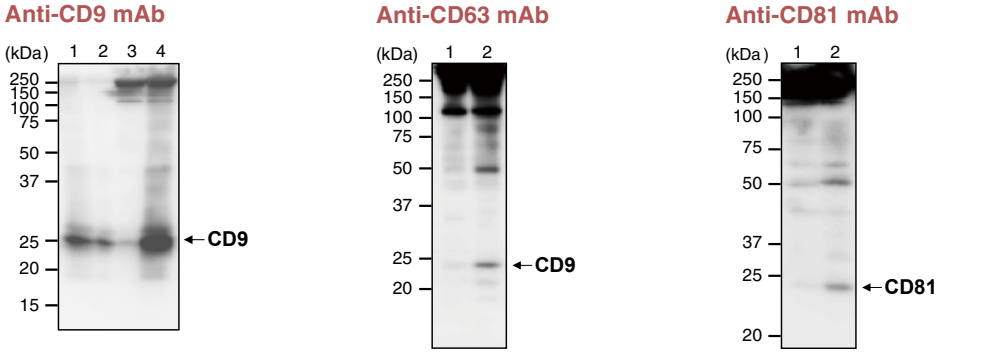
◎ **Biotinylated antibodies are against CD9, CD63, CD81, and EpCAM.**
◎ **Use with the Exocap™ Streptavidin Kit for isolation of exosomes.**
◎ **Also suitable for Flow cytometry, Sandwich ELISA and CLEIA.**

Western blotting (non-reducing condition)



Sample: HeLa-derived exosomal lysate

Immunoprecipitation

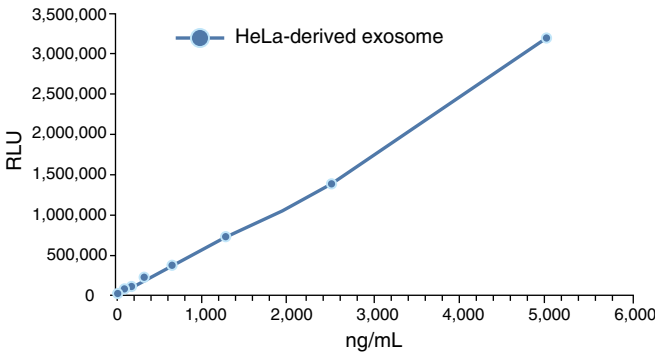


Sample: HeLa cell culture supernatant
Lane 1: Exosome lysate (1 μg)
Lane 2: Exosome lysate (0.3 μg)
Lane 3: IP (isotype control)
Lane 4: IP (Code No.MEX001-3)

Sample: Human sera
Lane 1: IP (isotype control)
Lane 2: IP (Code No.MEX002-3)

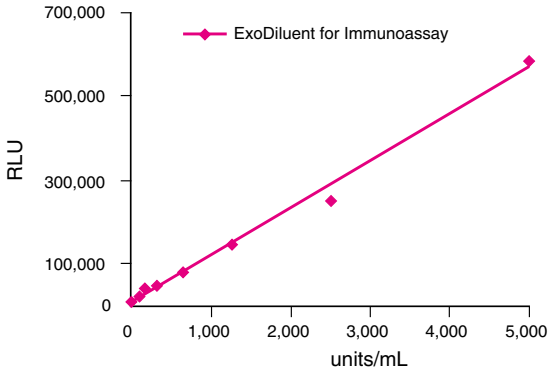
Sample: Human sera
Lane 1: IP (isotype control)
Lane 2: IP (Code No.MEX003-3)

SwELISA



Sample: HeLa-derived exosome
Capture Ab: Anti-CD63 mAb (Code No.MEX002-3)
Detector Ab: Anti-CD9 mAb (Code No.MEX001-3)

SwCLEIA



Sample: HT29-derived exosomes prepared by ultracentrifugation
Capture Ab: Anti-CD9 mAb (MEX001-3)
Detector Ab: Anti-EpCAM mAb-Biotin (MEX004-6)

Product list

Code No.	Product name	Clone	Isotype	Applications	Cross reactivity	Size
MEX001-3	Anti-CD9 mAb	A100-4	Mouse IgG2aκ	WB, IP, FCM, ELISA	Human, Monkey	100 μg/100 μL
MEX002-3	Anti-CD63 (LAMP-3) mAb	C047-1	Mouse IgG2bκ	WB, IP, FCM, ELISA	Human, Monkey	100 μg/100 μL
MEX003-3	Anti-CD81 (TAPA1) mAb	A103-10	Mouse IgG2aκ	WB, IP, FCM, ELISA	Human, Hamster, Monkey	100 μg/100 μL
MEX001-4	Anti-CD9 mAb-FITC	A100-4	Mouse IgG2aκ	WB, IP, FCM	Human, Monkey	100 μg/100 μL
MEX002-4	Anti-CD63 (LAMP-3) mAb-FITC	C047-1	Mouse IgG2bκ	WB, IP, FCM	Human, Monkey	100 μg/100 μL
MEX003-4	Anti-CD81 (TAPA1) mAb-FITC	A103-10	Mouse IgG2aκ	WB, IP, FCM	Human, Hamster, Monkey	100 μg/100 μL
MEX001-6	Anti-CD9 mAb-Biotin	A100-4	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX002-6	Anti-CD63 (LAMP-3) mAb-Biotin	C047-1	Mouse IgG2bκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX003-6	Anti-CD81 (TAPA1) mAb-Biotin	A103-10	Mouse IgG2aκ	WB, FCM, ELISA	Human	50 μg/50 μL
MEX004-6	Anti-CD326 (EpCAM) mAb-Biotin	B8-4	Mouse IgG1κ	FCM, ELISA	Human	50 μg/50 μL
MEX001-12	Anti-CD9 mAb-ALP	A100-4	Mouse IgG2aκ	WB, IP, FCM	Human	50 μL
MEX002-12	Anti-CD63 (LAMP-3) mAb-ALP	C047-1	Mouse IgG2bκ	WB, IP, FCM	Human	50 μL
MEX003-12	Anti-CD81 (TAPA1) mAb-ALP	A103-10	Mouse IgG2aκ	WB, IP, FCM	Human	50 μL

WB: Western blotting, FCM: Flow cytometry, IP: Immunoprecipitation

Related Products

Code No.	Product name	Clone	Isotype	Applications	Cross reactivity	Size
D131-3	Anti-CD9 (Mouse) mAb	JF9	Rat IgG2b	FCM	Mouse	100 μg/100 μL
D263-3	Anti-CD63 (LAMP-3) (Mouse) mAb	R5G2	Rat IgG2b	WB, FCM, IC*	Mouse	100 μg/100 μL
D269-3	Anti-EpCAM (CD326) (Mouse) mAb	2-17-F1	Rat IgG2a	FCM	Mouse	100 μL
D252-3	Anti-CD9 (Human) mAb	10H6	Mouse IgG1κ	WB, FCM	Human	100 μg/100 μL
D281-3	Anti-CD61 (GPIIIa) (Human) mAb	T74	Mouse IgG1κ	FCM	Human	100 μg/100 μL
D281-A48	Anti-CD61 (GPIIIa) (Human) mAb -Alexa Fluor® 488	T74	Mouse IgG1κ	FCM	Human	50 μg/50 μL
D281-A64	Anti-CD61 (GPIIIa) (Human) mAb -Alexa Fluor® 647	T74	Mouse IgG1κ	FCM	Human	50 μg/50 μL
D161-3	Anti-MFG-E8 (Mouse) mAb	2422	Hamster IgG	IP, FCM, IH*, ELISA*, NT*	Mouse	100 μg/100 μL
D199-3	Anti-MFG-E8 (Mouse) mAb	18A2-G10	Hamster IgG	WB, IH	Mouse	100 μg/100 μL
K0142-3	Anti-PSMA (Human) mAb	107-1A4	Mouse IgG1	FCM, Other*	Human	100 μg/100 μL
K0142-4	Anti-PSMA (Human) mAb-FITC	107-1A4	Mouse IgG1	FCM	Human	100 μL
K0142-5	Anti-PSMA (Human) mAb-PE	107-1A4	Mouse IgG1	FCM	Human	1 mL (50tests)
RN028P	Anti-EIF2C1 (AGO1) pAb	polyclonal	Rabbit Ig (aff.)	WB, IP, IC*, RIP	Human, Mouse	200 μL
RN028PW	Anti-EIF2C1 (AGO1) pAb	polyclonal	Rabbit Ig (aff.)	WB, IP, IC*	Human, Mouse	100 μL
RN003M	Anti-EIF2C2 (AGO2) (Human) mAb	1B1-E2H5	Mouse IgG2aλ	WB, IP, RIP	Human	200 μg/200 μL
RN005M	Anti-EIF2C2 (AGO2) mAb	2A8	Mouse IgG1κ	WB, IP, IC*, IH*, RIP, CLIP*	Human, Mouse, Rat, Hamster	200 μg/200 μL
RN029PW	Anti-EIF2C2 (AGO2) pAb	polyclonal	Rabbit Ig (aff.)	WB	Human, Mouse, Rat	100 μL
RN003P	Anti-TNRC6A (GW182) (Human) pAb	polyclonal	Rabbit Ig (aff.)	WB, IP, IC, RIP, CLIP	Human	200 μL
RN046PW	Anti-SYNCRIP (HNRNPQ) pAb	polyclonal	Rabbit Ig (aff.)	WB, IP, RIP*, CLIP*	Human, Mouse, Rat, Hamster	100 μL
RN015P	Anti-YBX1 (Human) pAb	polyclonal	Rabbit Ig (aff.)	WB, IP, RIP*, CLIP*	Human, Mouse, Rat, Hamster	200 μL

WB: Western blotting, FCM: Flow cytometry, IP: Immunoprecipitation, IC: Immunocytochemistry, IH: Immunohistochemistry, RIP: RNP Immunoprecipitation
CLIP: Cross-linked Immunoprecipitation, NT: Neutralization
*: The use is reported in a research article (Not tested by MBL). Please check the data sheet for detailed information.

Isotype control

Code No.	Product name	Clone	Isotype	Size
M075-3	Mouse IgG1 (isotype control)	2E12	Mouse IgG1κ	100 μg/100 μL
M076-3	Mouse IgG2a (isotype control)	6H3	Mouse IgG2aκ	100 μg/100 μL
M077-3	Mouse IgG2b (isotype control)	3D12	Mouse IgG2bκ	100 μg/100 μL
M078-3	Mouse IgG3 (isotype control)	6A3	Mouse IgG3	100 μg/100 μL
M075-4	Mouse IgG1 (isotype control)-FITC	2E12	Mouse IgG1κ	50 μg/1 mL
M076-4	Mouse IgG2a (isotype control)-FITC	6H3	Mouse IgG2aκ	50 μg/1 mL
M077-4	Mouse IgG2b (isotype control)-FITC	3D12	Mouse IgG2bκ	50 μg/1 mL
M078-4	Mouse IgG3 (isotype control)-FITC	6A3	Mouse IgG3	50 μg/1 mL
M075-6	Mouse IgG1 (isotype control)-Biotin	2E12	Mouse IgG1κ	50 μg/50 μL
M076-6	Mouse IgG2a (isotype control)-Biotin	6H3	Mouse IgG2aκ	50 μg/50 μL
M077-6	Mouse IgG2b (isotype control)-Biotin	3D12	Mouse IgG2bκ	50 μg/50 μL
M078-6	Mouse IgG3 (isotype control)-Biotin	6A3	Mouse IgG3	50 μg/50 μL

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