

Observation

TEM

Isolation

Cell medium
Serum / plasma
stem cell culture media
Urine
Body fluid

Purified exosome

Normal
Cancer

Extraction

DNA
RNA / Protein

Transfection

siRNA

Professional kits for exosome research

exosome



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Professional kits for exosome research

exosome

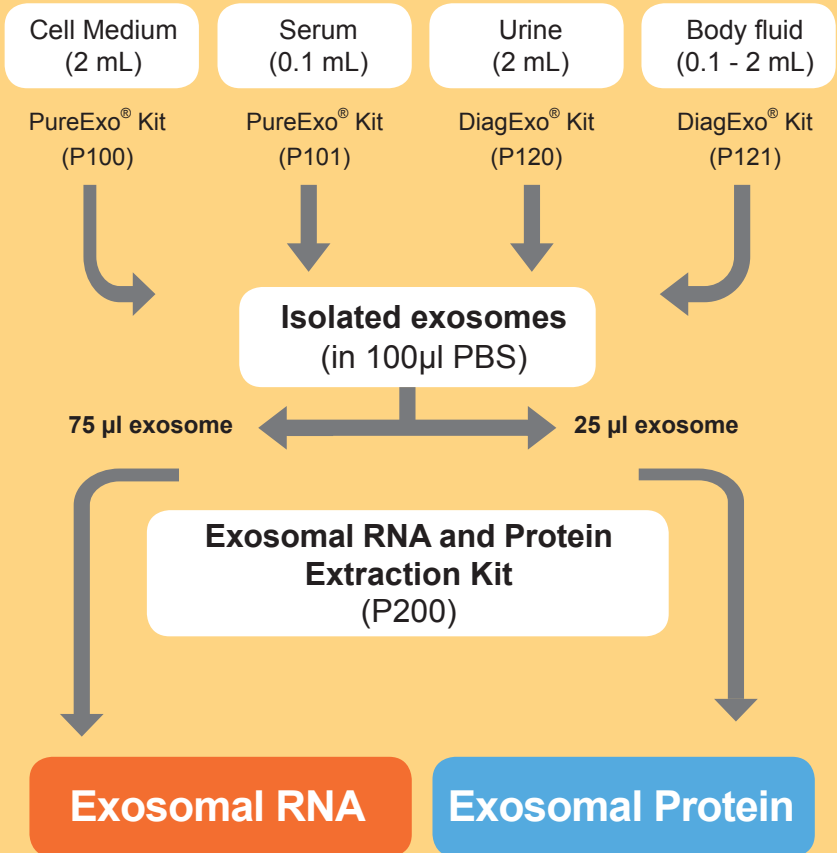


	101Bio PureExo Kits	Other Kits	Ultracentrifuge
Method	Filter Column	PEG Precipitation	Ultracentrifuge
Purity	> 95%	< 30%	< 20%
Time	1 hour	24 hours	48 hours
Minimum starting material	2 mL medium or 0.2 mL serum	20 mL medium or 1 mL serum	50 mL medium 2 mL serum
Yield	10 X	1 X	0.4 X

Professional kits for exosome research

exosome

Selection Guide



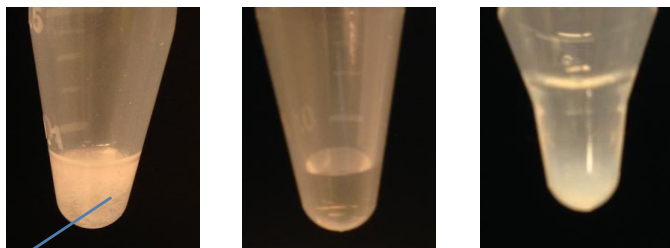
Isolation

PureExo[®] Exosome Isolation kit

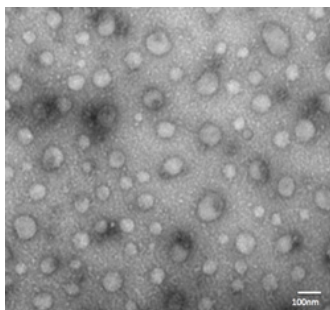
- 使用簡單，不需要超高速離心 (< 1 hours)
- 回收率高 (其他廠牌的 10 倍)
- Sample 使用量少 (只需 2 ml cell culture medium 或 0.2ml 的血清)
- 可分離出 >95% 的 Pure exosome
- 分離完整的 exosome，具有良好的形態
- 適用於 cell culture media, 血清，血漿，尿液，其他人類體液

高於他牌 10 倍的回收率

從 2 mL cell culture medium 中分離 exosome



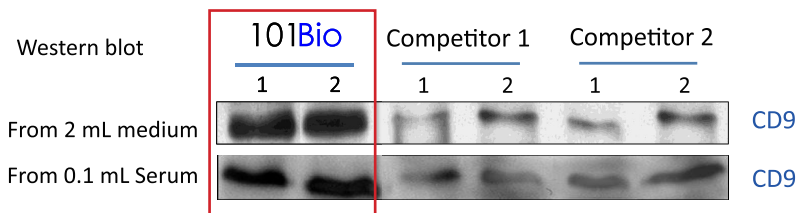
White pellet is concentrated exosome



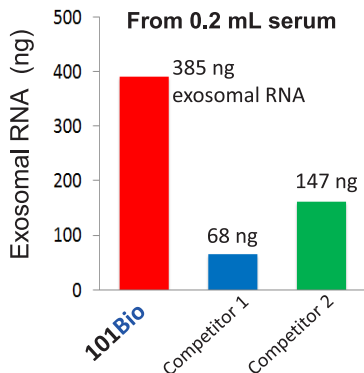
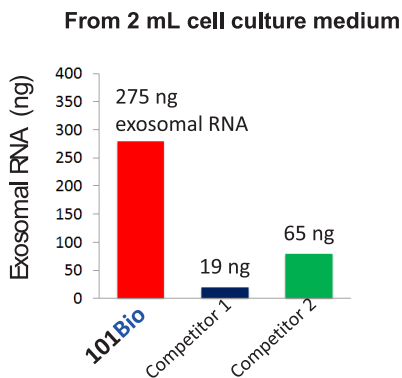
可分離出均勻的球型 exosomes

Transmission electron microscopy (TEM) micrograph of exosomes recovered from NIH3T3 cell media with PureExo[®] Exosome Isolation kit.

可由 **exosome** 中獲得高濃度的 **protein**



High yield exosomal RNA



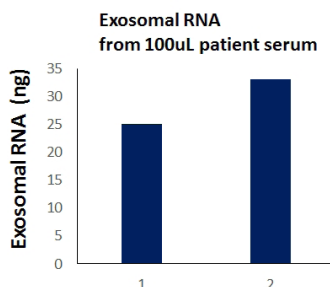
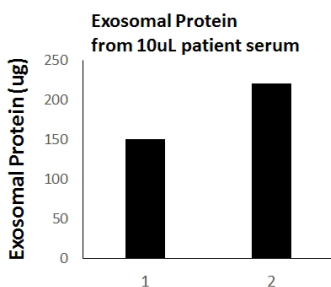
Cat No	Product	Size
P100	PureExo [®] Exosome Isolation Kit (for cell culture media)	10 rxns
P100L		40 rxns
P101	PureExo [®] Exosome Isolation Kit (for serum and plasma)	10 rxns
P101L		40 rxns
P107S	PureExo [®] Exosome Isolation kit (for stem cell culture media)	2 rxns
P107		10 rxns
P120	DiagExo [®] Urinary Exosome Isolation Kit	10 rxns
P120L		40 rxns
P121	DiagExo [®] Human Body Fluid Exosome Isolation kit	10 rxns
P121L		40 rxns

Purified Exosome

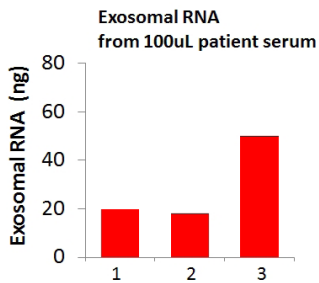
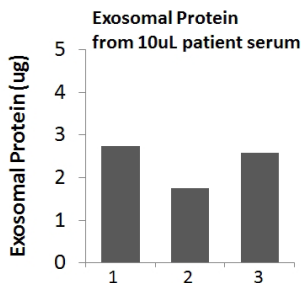
Purified Human and Breast Cancer Patient Exosome

- Purified exosome 可做為 standard
- 可用於研究 human exosome 的活性
- 分離自 serum，並通過 bloodborne 病原體的檢驗 (HIV, HBV, HCV)

Purified Human Exosome (Normal)

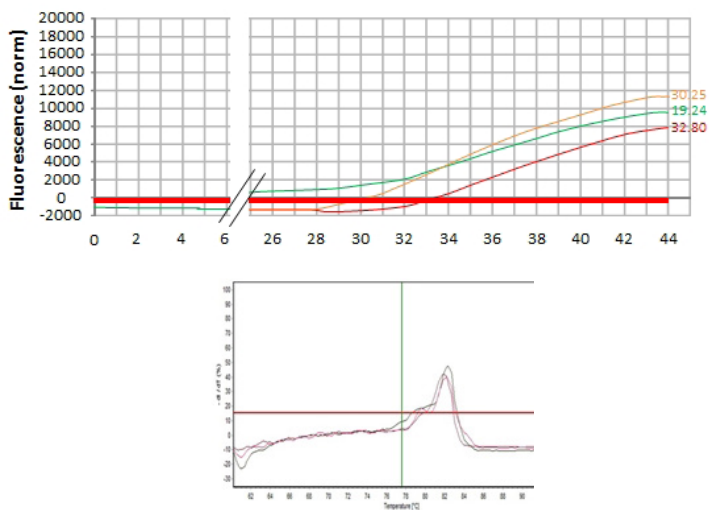


Purified Breast Cancer Patient Exosome (from serum)



The yield of exosomal protein and exosomal RNA from the human exosome is good.

以 qPCR 證明由 Breast Cancer Patient 血液中
高度純化的 exosome 其 RNA quality 相當好



Cat No	Product	Size
P140	Purified Normal Human Exosome (from serum)	~150 uL
P141	Purified Breast Cancer Patient Exosome (from serum)	~150 uL

Extraction

Exosomal DNA Extraction kit

- 產量高，可從 200 μL 的血清或 50 mL 的 cell medium 分離出的 exosome 中萃取出 100 ~ 300 ng 的 DNA
- 萃取後的 DNA 可直接進行 PCR 與定序，不需再經過沉澱、濃縮或去鹽類的步驟

Cat No	Product	Size
P230-25	Exosomal DNA Extraction Kit	25 rxns
P200-50		50 rxns

Extraction

Exosomal RNA and Protein Extraction kit

- 方便，可於 exosome 中同時萃取 RNA 與 protein
- 產量高，50 μL ~ 100 μL 的 pure exosome，可萃取出 50 ~ 100 ng 的 RNA 或 150 ~ 200 μg 的 protein
- 若只需萃取 protein，可單獨購買 Exosomal Protein Lysis buffer

Cat No	Product	Size
P200	Exosomal RNA and Protein Extraction Kit	20 rxns
P200P	Exosomal Protein Lysis buffer	2 mL

Extraction

DiagExo[®] Serum Exosomal Protein Extraction kit

- 方便，可直接由血清或其他體液中直接萃取 exosomal protein
- 適用樣本為 serum, plasma, breast milk, saliva, peritoneal fluid, cerebrospinal fluid (CSF), GI fluid, amniotic fluid 等體液
- 萃取蛋白可應用於 ELISA、protein mass spectrometry、gel analysis 等相關實驗

Human body fluid 使用量

Solution A/B/C	CSF	Amniotic fluid	Inflammatory fluid	Lymph fluid	Breast milk	Saliva	GI fluid	Broncho alveolar lavage fluid
Solution A 40 µL Solution B 40 µL Solution C 40 µL	100 µL	100 µL	100 µL	100 µL	200 µL	400 µL	400 µL	400 µL
Solution A 80 µL Solution B 80 µL Solution C 80 µL	200 µL	200 µL	200 µL	200 µL	400 µL	800 µL	800 µL	800 µL
Solution A 120 µL Solution B 120 µL Solution C 120 µL	300 µL	300 µL	300 µL	300 µL	600 µL	1.2 mL	1.2 mL	1.2 mL
Solution A 160 µL Solution B 160 µL Solution C 160 µL	400 µL	400 µL	400 µL	400 µL	800 µL	1.6 mL	1.6 mL	1.6 mL
Solution A 200 µL Solution B 200 µL Solution C 200 µL	500 µL	500 µL	500 µL	500 µL	1 mL	2 mL	2 mL	2 mL

Cat No	Product	Size
P300	DiagExo [®] Serum Exosomal Protein Extraction kit	10 rxns

Transfection

ExoFectin[®] sRNA-into-Exosome Kit

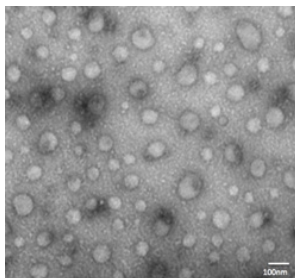
- 能將 siRNA、miRNA 送入 exosome 中
- 轉染效率高
- 有化學法與電穿孔法可供選擇

Cat No	Product	Size
P400	ExoFectin [®] sRNA-into-Exosome Kit (Electro)	10 rxns
P401	ExoFectin [®] sRNA-into-Exosome Kit (Chemical)	100 uL

Observation

Exosome-TEM-easy Kit

- 使用簡便
- 可幫助 TEM 獲取良好的 exosome 影像



Transmission Electron Microscopy image by Exosome-TEM-easy Kit

Cat No	Product	Size
P130	Exosome-TEM-easy Kit	10 rxns

PureExo[®] Exosome Isolation kit (for cell culture media)

Osteikoetxea X, Németh A, Sódar BW, Vukman KV, Buzás EI. Extracellular vesicles in cardiovascular diseases, are they Jedi or Sith? J Physiol. 2016 Feb 13.

Rager T, Olson J, Zhou Y, Wang Y, Besner G. Exosomes Secreted from Bone Marrow-Derived Mesenchymal Stem Cells Protect the Intestines from Experimental Necrotizing Enterocolitis. J Pediatr Surg. 2016 March;S0022-3468(16)00149-4

Zhu D, Liu Z, Wang F. Effect of exosome extracted from 3T3 on proliferation of mouse colorectal cancer cells CT26. Chin J of Exp Surg. 2015 July;32(7):1634-36

Maredziak M, Marycz K, Lewandowski D, Siudzińska A, Śmieszek A. Static magnetic field enhances synthesis and secretion of membrane-derived microvesicles (MVs) rich in VEGF and BMP-2 in equine adipose-derived stromal cells (EqASCs)-a new approach in veterinary regenerative medicine. In Vitro Cell Dev Biol Anim. 2015 Mar;51(3):230-40.

Salama A, Fichou N, Allard M, Dubreil L, De Beaurepaire L, Viel A, Jégou D, Bösch S, Bach JM. MicroRNA- 29b modulates innate and antigen-specific immune responses in mouse models of autoimmunity. PLoS One. 2014 Sep 9;9(9):e106153.

PureExo[®] Exosome Isolation kit (for serum or plasma)

Chen L, Chen R, Kemper S, Charrier A, Brigstock DR. Suppression of fibrogenic signaling in hepatic stellate cells by Twist1-dependent microRNA-214 expression: Role of exosomes in horizontal transfer of Twist1. *Am J Physiol Gastrointest Liver Physiol*. 2015 Sep 15;309(6):G491-9.

Chen L., Chen R., Brigstock D. MicroRNA profiling of circulating exosomes during experimental liver fibrosis. *Hepatology*. AASLD abstract, 2014 Oct. (Presidential Honored Distinct Abstract).

ExoFectin[®] sRNA-into-Exosome Kit (Chemical)

Salama A, Fichou N, Allard M, Dubreil L, De Beaurepaire L, Viel A, Jégou D, Bösch S, Bach JM. MicroRNA-29b modulates innate and antigen-specific immune responses in mouse models of autoimmunity. *PLoS One*. 2014 Sep 9;9(9):e106153.

ExoFectin[®] sRNA-into-Exosome Kit (Electro)

MARTINEZ N., SAITTA S., PATAQC C. Utilisation d'exosomes comme bithérapie contre le cancer du colon . *Projet de recherche 2013-2014*.