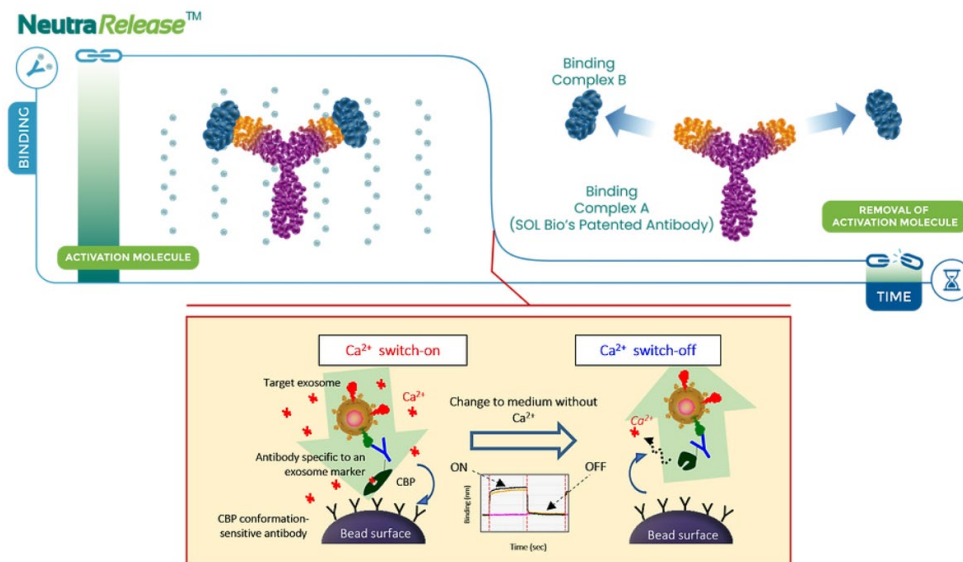


A Preparation Kit for Exosome Subpopulation Liquid Suspension Sample

NeutraRelease™



Magnetic separation based on 'Ca²⁺ switch-on/off binding reaction'

Exosome Biomarker Discovery Experimental Tool using General Laboratory Equipment

Through the supply of the **NeutraRelease™** kit, **SOL Bio Corp.** provides tools for the separation and recovery of exosome subpopulations based on a new magnetic separation technology, '**Ca²⁺-dependent switch-on/off binding mechanism**', that uses antibodies specific to biomarkers present on the surface of exosomes

- 1) **Pre-processing of exosome samples:** preparation of exosome populations contained in samples such as serum
- 2) **Isolation of exosome subpopulation:** magnetic separation of exosome subpopulation with specific target biomarkers
- 3) **Exosome recovery:** elution of exosomes captured on magnetic beads into solution at neutral pH

The exosome subpopulation recovered in this way can be used as a sample to further separate exosome sub-subpopulations with other second markers (e.g., different tetraspanin markers).

- ✓ Therefore, **the heterogeneous characteristics of exosome are reduced** through the isolation and recovery of exosome subpopulations. Furthermore, the analysis accuracy for **the discovery of new exosome biomarkers has been significantly increased**

NeutraRelease™ Exosome Isolation & Recovery Kit

Sub U1 (CD9) Isolation & Recovery kit (10 tests/1 kit)



Title	Component name	Function	Container
Reagent 1	Reversible Linker-Coupled Magnetic Beads	Detachably capturing exosome onto magnetic bead	1.0 mL × 2 tubes
Reagent 2	Biotinylated Anti-CD9 Antibody (20X)	Binding to the CD9-bearing exosome in sample	0.1 mL × 1 tube
Reagent 3	Biotin Solution (50X)	Quenching the biotin binding sites remaining on streptavidin	0.1 mL × 1 tube
Reagent 4	Washing Buffer (10X)	Removing the unbound components from the magnetic bead	2.6 mL × 1 bottle
Reagent 5	Binding Buffer	Diluting reagents 2 & 3	5.0 mL × 1 bottle
Reagent 6	Sample Binding Buffer	Diluting test sample including exosome	1.0 mL × 1 tube
Reagent 7	Elution Buffer	Releasing the CD9-positive exosome from the magnetic bead	1.0 mL × 1 bottle

NeutraRelease™ kits for isolating and recovering exosome subpopulation

Product Name	NeutraRelease™ Sub U1	NeutraRelease™ Sub U2	NeutraRelease™ Sub U3	NeutraRelease™ Sub U4 (In preparation)
REF (Cat. No.)	SOL-7122	SOL-7123	SOL-7124	SOL-7125
Target subpopulation	CD9+	CD63+	CD81+	CD151+

Advantages of using NeutraRelease™

<p>Magnetic separation and elution employing a reversible linker</p> <p>An antibody for exosome isolation is fixed on magnetic beads to be removable by Ca²⁺-dependent reversible linker (Patent Technology, SOL Bio Corp.)</p>	<p>High yield and damage-free recovery of exosome subpopulations</p> <p>The isolation and recovery rate of exosomes, i.e., CD9+ exosomes, CD63+ exosomes, or CD81+ exosomes ≥ 90%</p>	<p>Allowing to sequential isolation of sub-subpopulation sample</p> <p>Isolated and recovered exosomes are available as samples for sequential separation for other markers than those used</p>
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For your information, in addition to the markers specified in the kit, if you want to use the biomarker of interest to separate the exosome subpopulation, please contact us about the customized service.

NeutraRelease™ Characteristics & Applicability

Guidance of the kit and comparison of application ranges between immuno-affinity isolation kits

	Liquid recovery rate after isolation	Molecular diagnosis target marker via qPCR		Immunoassay utility		
		Exosome sub-population	Exosome sub-subpopulation	Exosome sub-population	Exosome sub-subpopulation	Exosome sub-sub-subpopulation
NeutraRelease™	> 90%	DNAs RNAs	After the second separation using ExoBead™, DNAs and RNAs*	WB	Using ExoMAIN™, ELISA* After the second separation using ExoBead™, WB*	Using ExoMAIN™, ELISA*
Third-Party Immunobeads	< 60% (Recovery using acid pH)	DNAs RNAs	Difficult to access	WB	FACS	Difficult to access

* Additional data available when using with ExoBead™ and ExoMAIN™

Definitions

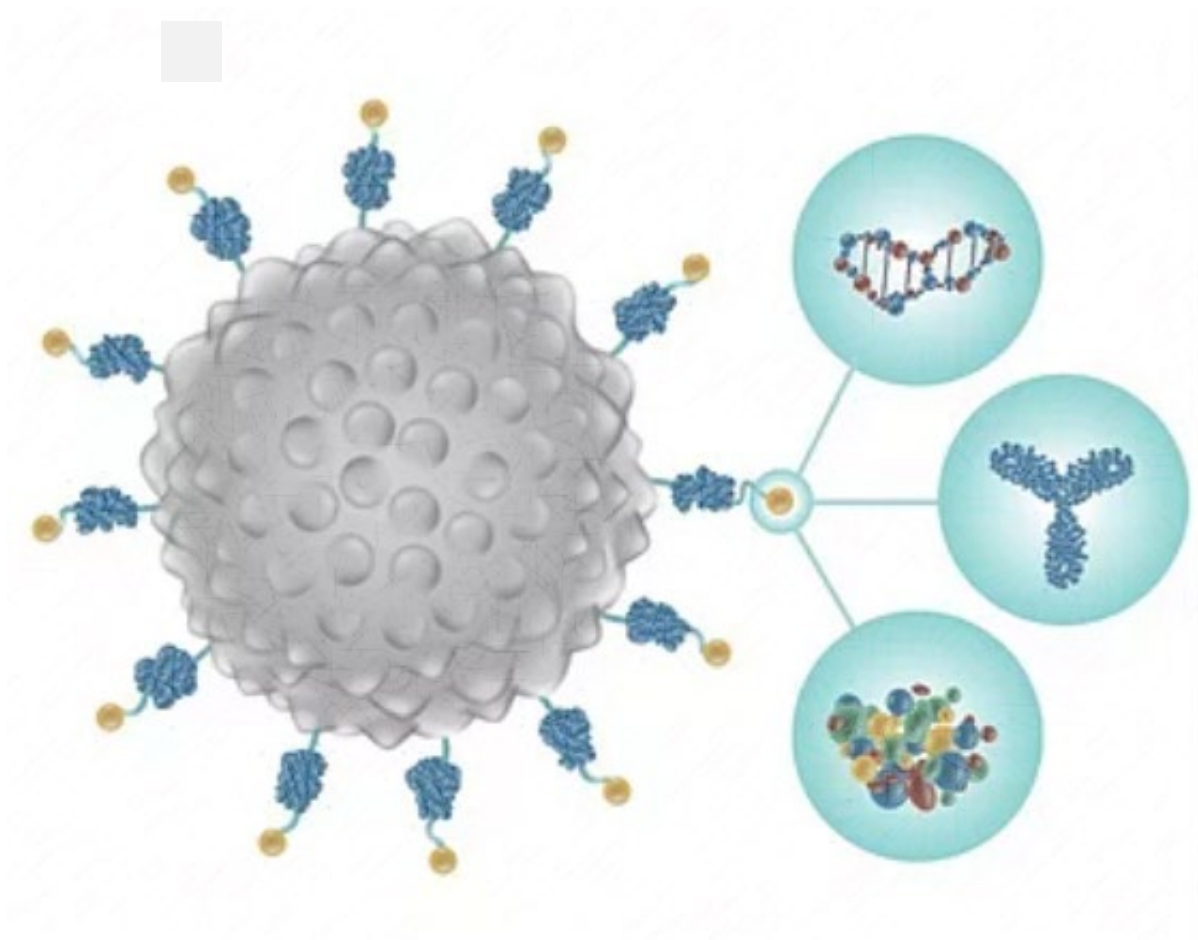
- WB = Western blotting
- ELISA = Enzyme-linked immunosorbent assay
- FACS = Fluorescence-activated cell sorting
- Exosome subpopulation = Single marker-positive exosome
- Exosome sub-subpopulation = Double markers-positive exosome
- Exosome sub-sub-subpopulation = Triple markers-positive exosome

Comparison of performances: SOL Bio vs. global company 'I'

		NeutraRelease™ of SOL Bio	Immunobeads of company 'I'
Comparison target	Number of separation provided per kit (based on Product Manual Criteria)	10 times	30 times
	Intended use	ELISA for exosome subpopulation and sub-subpopulation for 3 ~ 6 biomarkers* (Pan-exosome marker analysis is possible using ExoMAIN™)	WB, qPCR, or FACS only at the exosome subpopulation level
		WB and qPCR analyses at the exosome subpopulation and sub-subpopulation levels*,** (Exosome sub-subpopulation can be separated using ExoBead™)	
Conclusion	SOL Bio's products are specialized to increase the probability of discovering biomarkers by reducing heterogeneity		

* Each analysis protocol is available on demand

** Please contact us for conditions and protocols for molecular diagnosis (target: microRNAs, etc.)

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