



**TANBEAD**



# Switch 8

Multi-Functional  
Purification System

**■ New Maelstrom Switch 8, a cell, protein/antibody, nucleic acid purification system with changeable gearboxes that process small to large volumes.**

**Feature & Specifications:**



**Process Time**

- Up to 16 samples in one single run from 25-60 mins



**Flexible**

- Changeable gearbox, 1-16 throughput
- Support from 50 µl -10 ml volumes



**Performance**

- Comparable to other models
- Spin speed: 3000 RPM
- Magnet Force: 4: 4700 gauss, 8/16 3900 gauss



**Safety**

- 100~240Vac, 2.3~1.1A, 50/60Hz
- UV sterilization with door sensor
- Heating range: room temp. ~130°C



**Intuitive Interface**

- Pre-installed protocols with 100 programs storage
- 7" touch screen with error proof design



**Convenient**

- Able to fit in with Bio Safety Cabinet
- All M series kits compatible



**Portable**

- Instrument dimension and weight 524(W)x265(D)x412(H)mm / 16.5KG



**Certification**

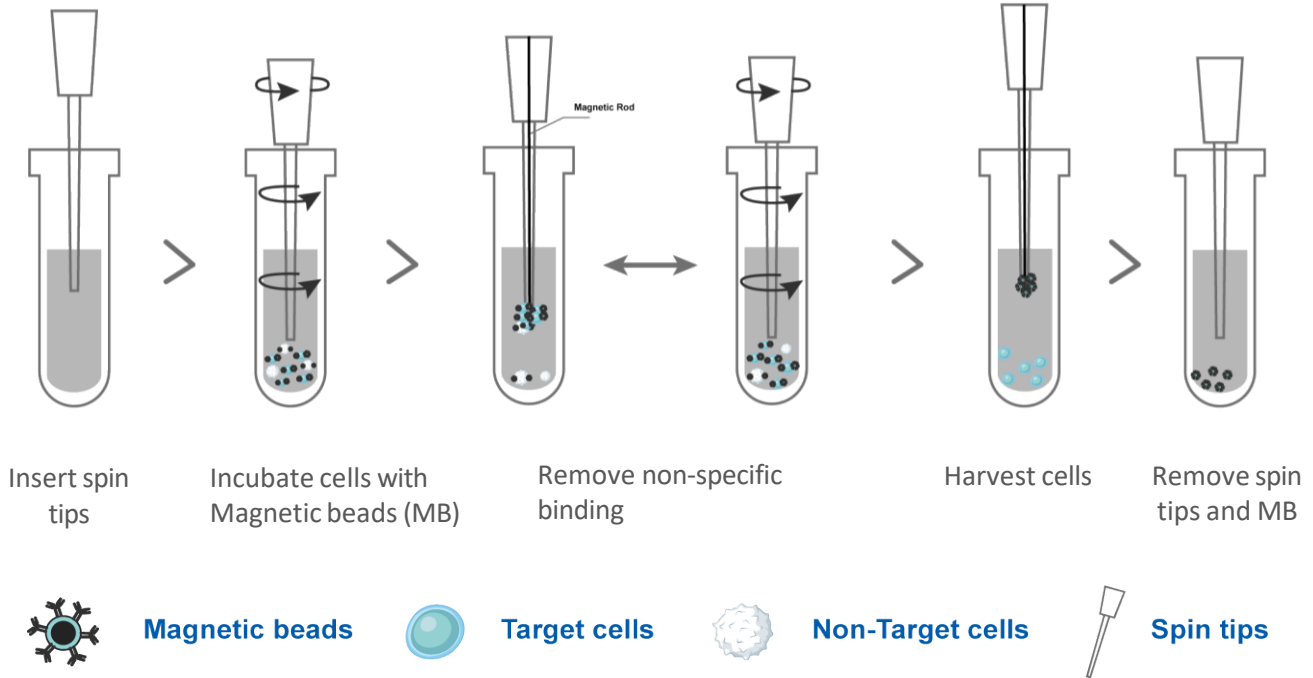
- ISO 13485: 2016
- IVDR



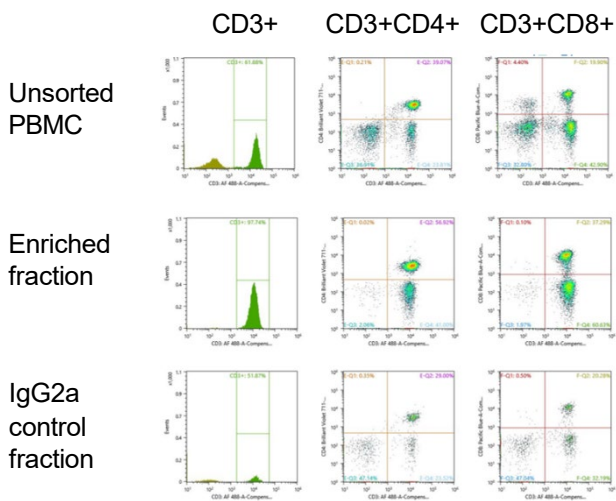
REF	Maelstrom™ Switch8
Dimensions	524(W) x 265(D) x 412(H) mm
Power Rating	AC 100~240V, 50/60Hz, 2.3~1.1A
Weight	≈16.5kg
Max Throughput	Switchable 4/8/16 tests (4/8 are standard equipment)
Process Volume	4: 0.1-10 mL 8/16: 0.05-1.6 mL
Magnet Force	4: 4,700 Gauss 8/16: 3,900 Gauss
Spin Speed	3000 RPM

# Multiple biomolecules purification flowchart

## - Cell Isolation



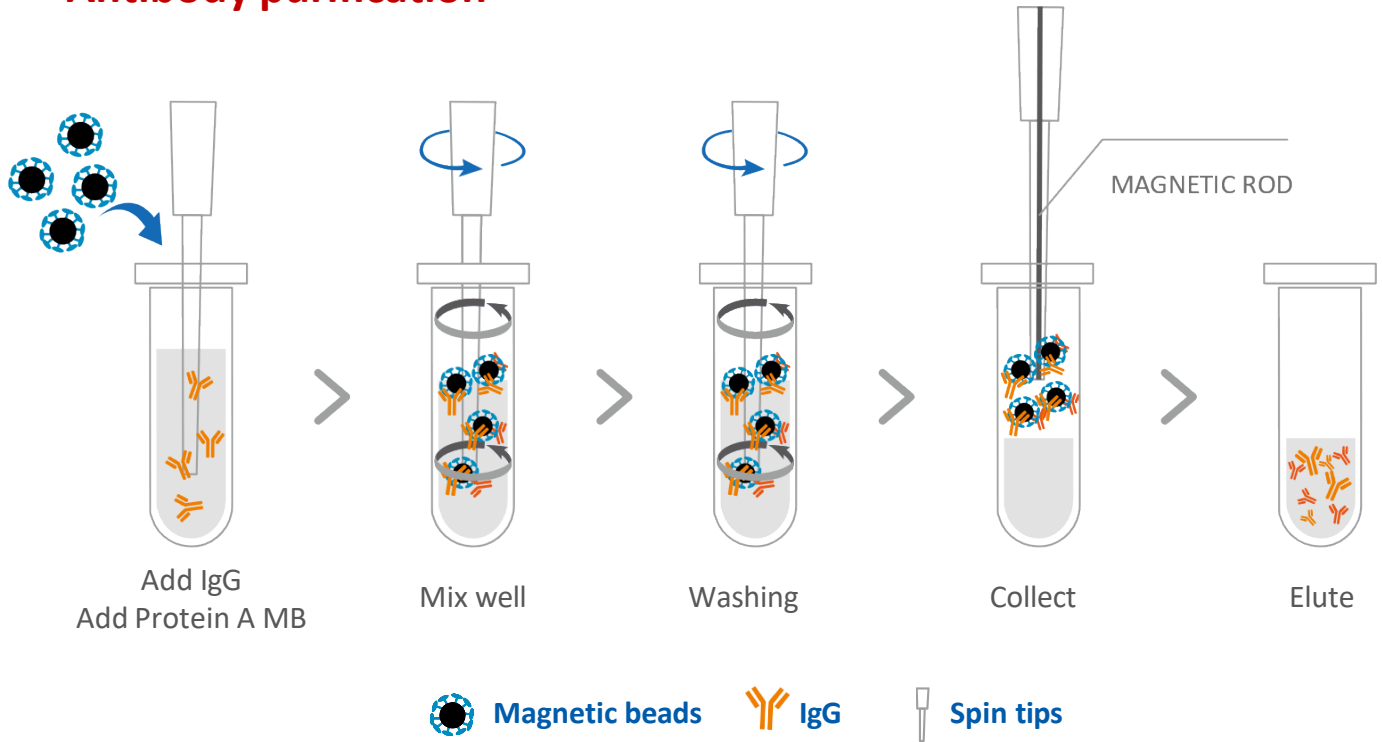
Instrument	Maelstrom™ switch 8
<b>Beads</b>	TANPURE Human CD3 Isolation Beads
<b>Input</b>	2x10 <sup>6</sup> PBMCs
<b>Turnaround time</b>	30 minutes
<b>Preliminary result</b>	Enriched cell purity: <b>97.74%</b> (CD3+ cell/ eluted cell) Viability: Culture with RPMI+10% FBS Day 0: <b>5.0x10<sup>4</sup> cells</b> (Viability: <b>94.4%</b> ) Day 3: <b>5.9x10<sup>4</sup> cells</b> (Viability: <b>97.1%</b> )



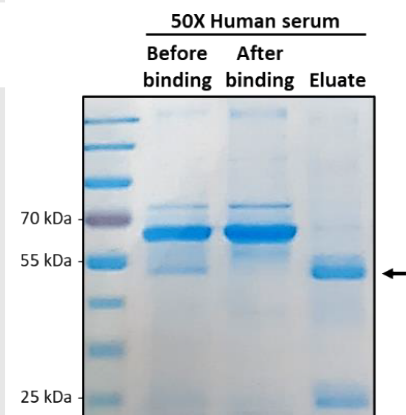
Cell types	Gated CD3 <sup>+</sup> cells	CD3 <sup>+</sup> CD4 <sup>+</sup>	CD3 <sup>+</sup> CD8 <sup>+</sup>
Unsorted PBMC	61.88%	39.07%	19.90%
Enriched fraction	97.74%	56.92%	37.29%
IgG2a control fraction	51.87%	29%	20.28%

# Multiple biomolecules purification flowchart

## - Antibody purification

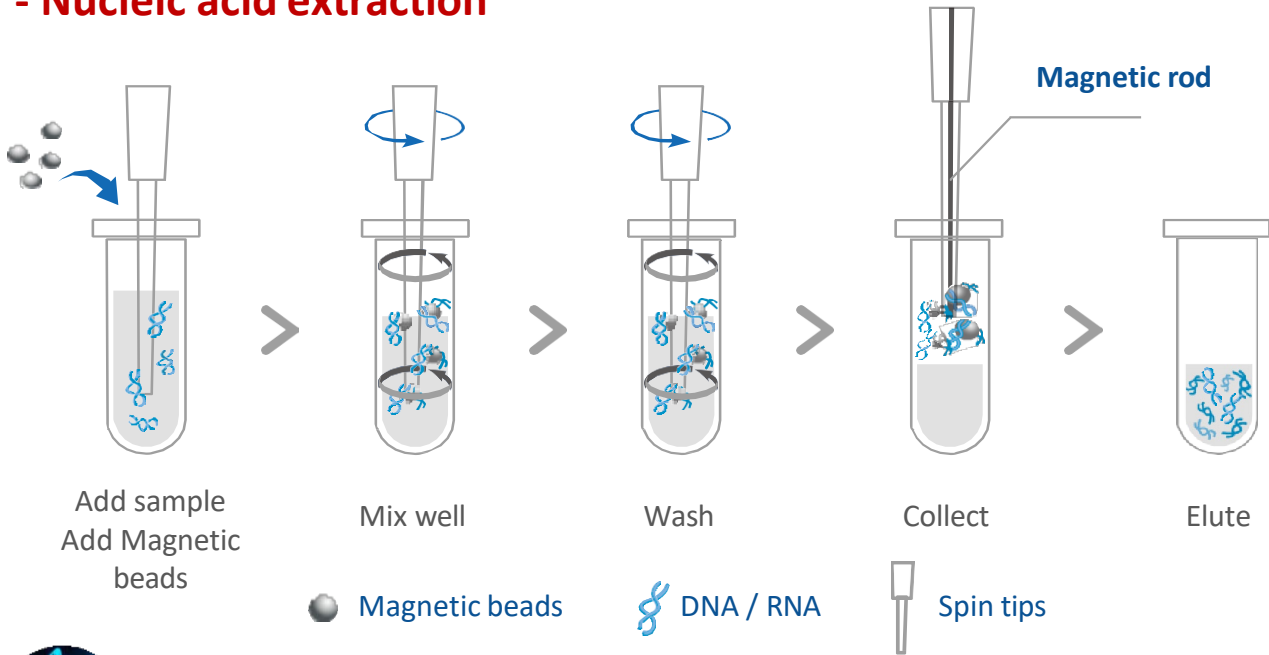


Method	Manual antibody purification	Automated antibody purification
Instrument	Magnetic rack	Maelstrom Switch 8
Beads	TANPURE Protein A MB (Cat. 304001)	
Concentration	10 mg/ml	
Use per test	50 $\mu$ l (0.5 mg)	
Input	Hu Serum => 50x dilution    Rb IgG => 60 $\mu$ g	
Binding Capacity (mg of bead)	(Nanodrop) 1. Human Serum Ig (50X) : 102.7 $\pm$ 2.4 $\mu$ g/mg of bead 2. Rabbit IgG: 89 $\pm$ 3.4 $\mu$ g/mg of bead	(Nanodrop) 1. Human Serum Ig (50X) : 111.3 $\pm$ 4.76 $\mu$ g/mg of bead 2. Rabbit IgG: 93.7 $\pm$ 4.16 $\mu$ g/mg of bead



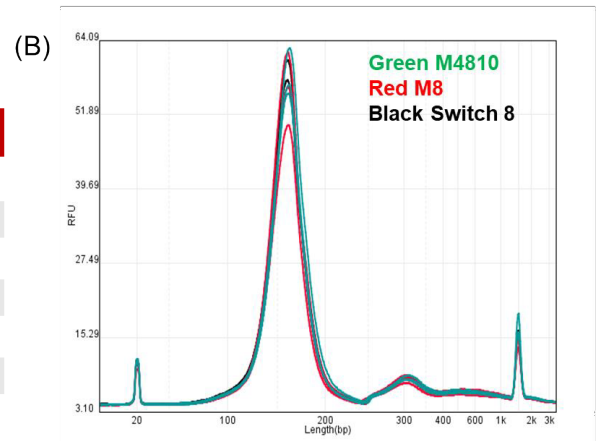
## Multiple biomolecules purification flowchart

### - Nucleic acid extraction

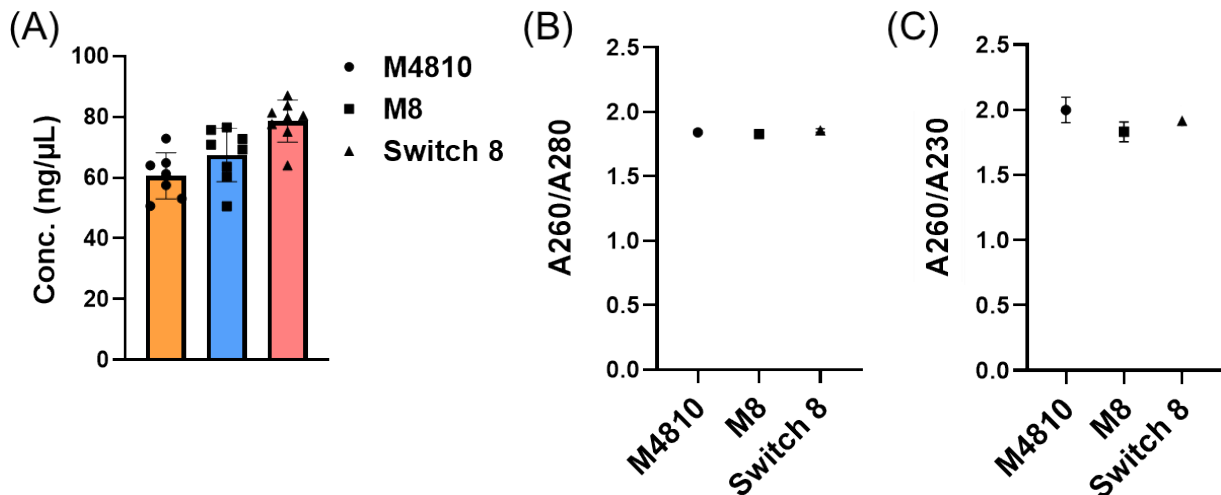


### cfDNA extraction, 61C

Machine		Mean±SD
M4810	Yield (ng)	17.38±1.75
	CV%	10.1%
M8	Yield (ng)	16.11±4.69
	CV%	29.1%
Switch 8	Yield (ng)	17.45±0.52
	CV%	3.0%



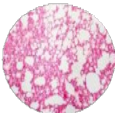
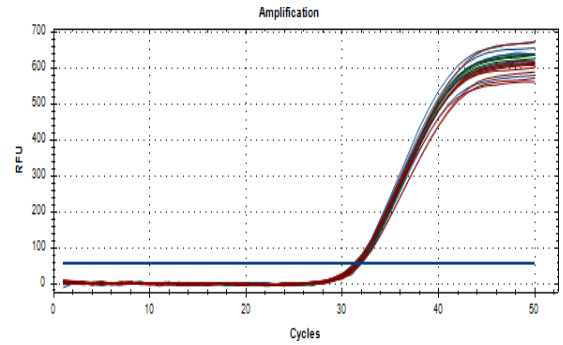
### Blood DNA extraction, 61E



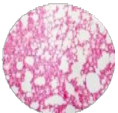
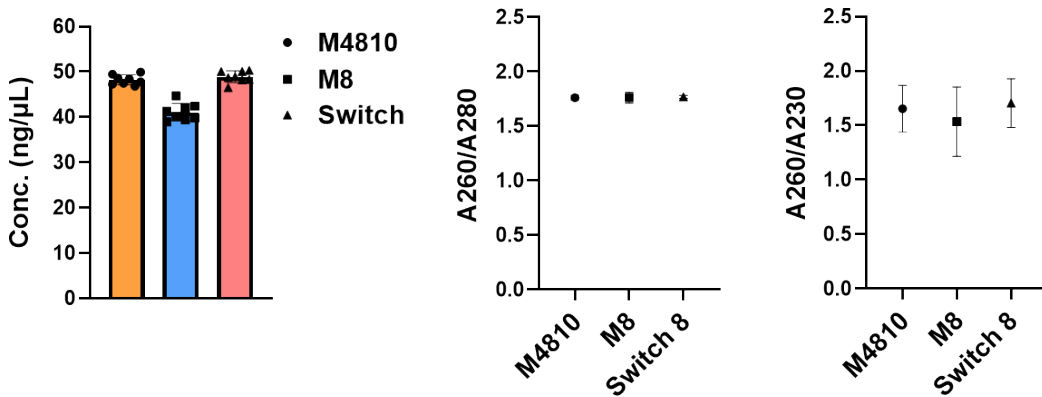


## DNA virus diagnosis, 665

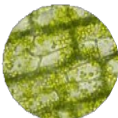
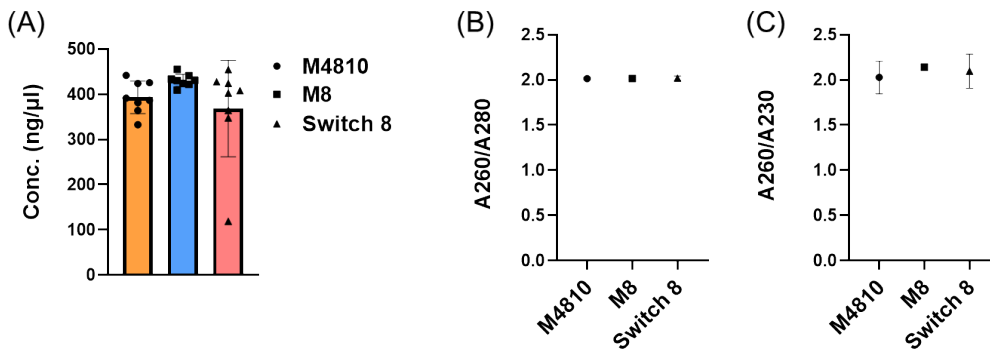
Machine	Sample	Ct, Mean±SD
M4810	HPV DNA	31.68±0.13
M8		31.55±0.22
Switch 8		31.54±0.29



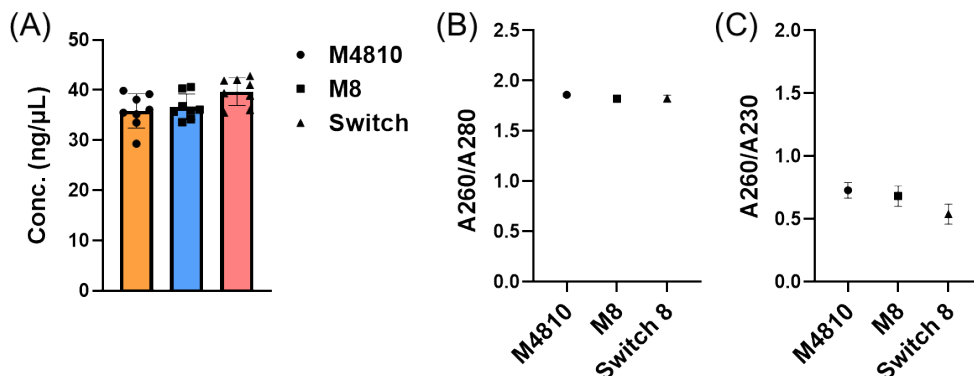
## Tissue DNA Extraction, 6T2



## Tissue RNA Extraction, 6K2

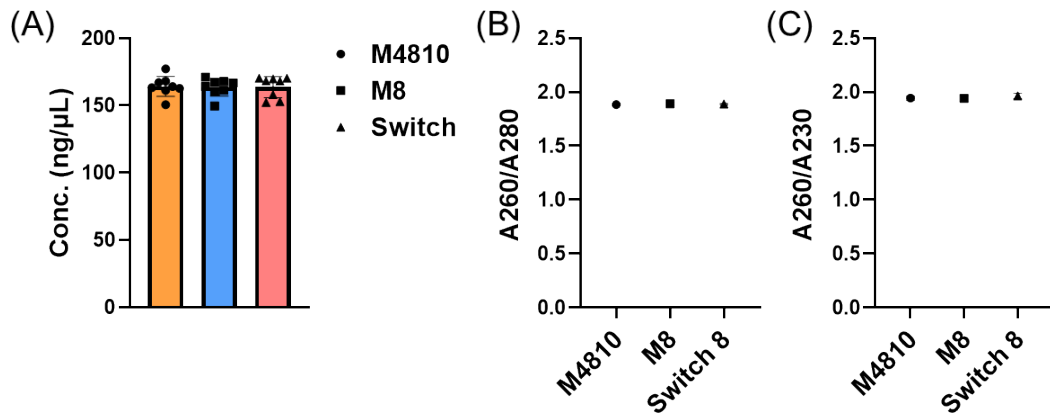


## Plant DNA Extraction, 613-SE

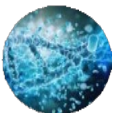
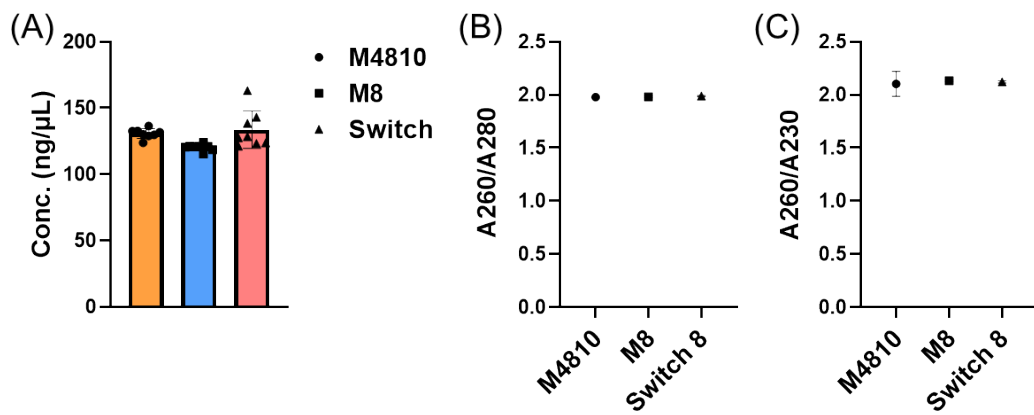




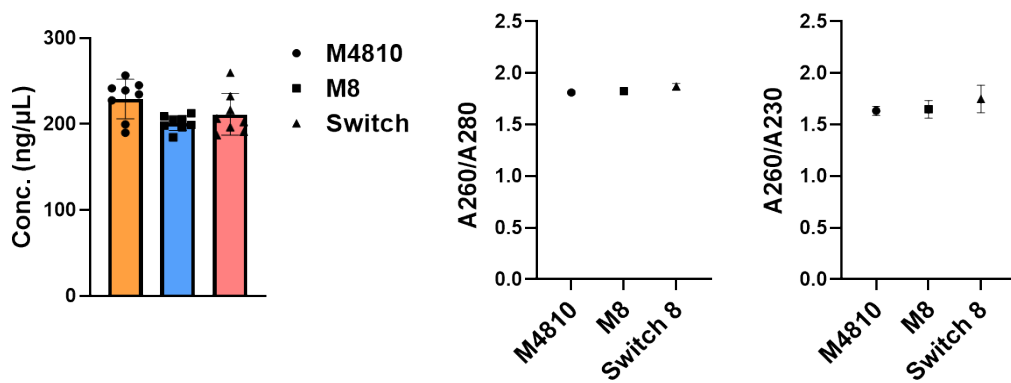
### Tissue DNA Extraction, 61P



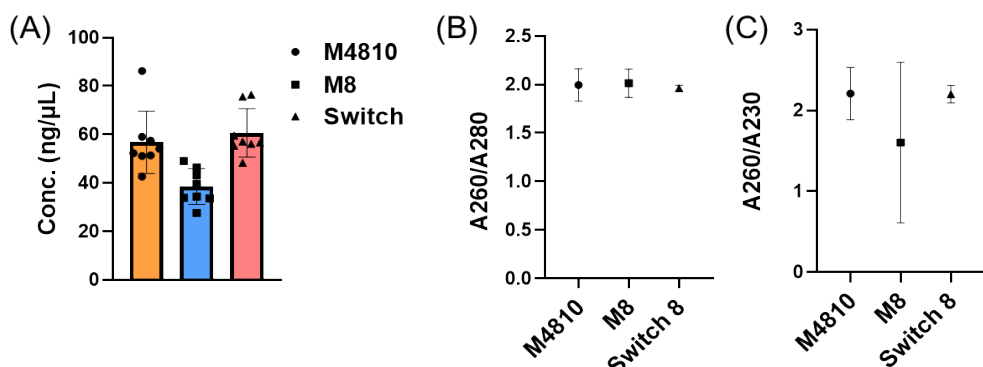
### Tissue RNA Extraction, 62P



### Plasmid DNA Extraction, 6PE



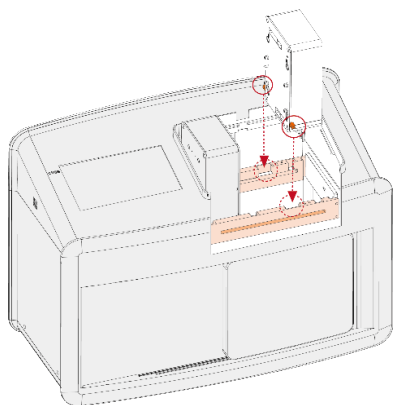
### Bacterial DNA Extraction, 61G





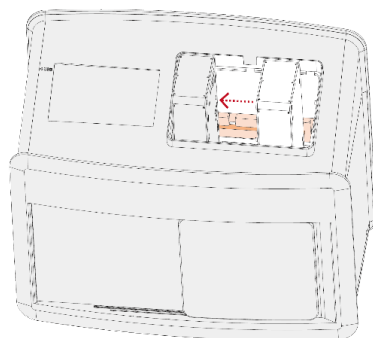
## How to switch different throughput gearbox

Sample throughput gearbox switch is easy and fast. It has error proof design with positioning post and detective sensor showing home screen accordingly.



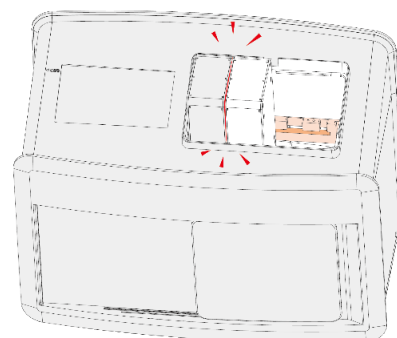
### Step 1

Locate the gearbox under guide rail



### Step 2

Push the gearbox to left



### Step 3

Attach the gearbox firmly



### Flexible

- Changeable gearbox, 1-16 throughput
- Support from 50  $\mu$ l -10 ml volumes



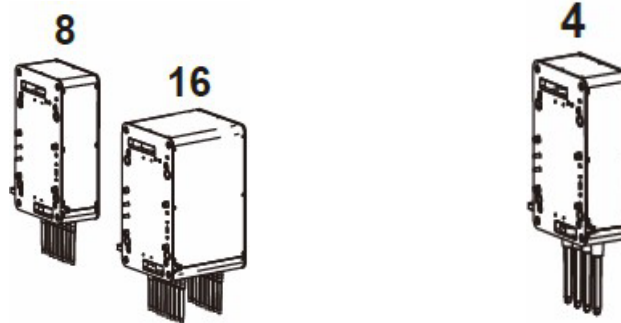
## Reagent Kits













### - Cell Isolation & Protein Purification

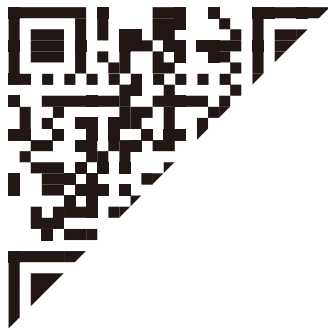
Product type	Product name	Ordering number
Cell isolation kit	Human CD3 Magnetic Beads	304016 (4ml)
	Human CD4 Magnetic Beads	Coming soon
	Human CD8 Magnetic Beads	Coming soon
	Human CD25 Magnetic Beads	Coming soon
	Human CD56 Magnetic Beads	Coming soon
	Streptavidin Magnetic Beads	Coming soon
Protein purification kit	Protein A Magnetic Beads	304001 (1ml) 304002 (2ml) 304003 (4ml)
	Protein G Magnetic Beads	304004 (1ml) 304005 (2ml) 304006 (4ml)
	Protein A/G Magnetic Beads	Coming soon
	Protein L Magnetic Beads	Coming soon

## Reagent Kits

### - Nucleic Acid Extraction



Sample Type	8/16 Tests / Run (Sample Input: up to 0.3 ml)	4 Tests / Run (Sample Input: 1-6 ml)
 <b>Blood</b>	M61EA46 M61ES46	L91E045 (RUO)
 <b>cfDNA</b>	M61CA46 M61CS46	L91C045
 <b>Plasmid</b>	M6PEA46 M6PES46	
 <b>Plant</b>	M613A46-SE M613S46-SE	
 <b>Tissue</b>	M6T2A46 / M6K2A46 M6T2S46 / M6K2S46	
 <b>Virus</b>	M665A46 M665S46	
 <b>FFPE</b>	M61PA46 / M61PS46 M62PA46 / M62PS46	
 <b>Stool</b>	M6SCA46 M6SCS46	
 <b>Food Feed</b>	M6GMA46 M6GMS46	
 <b>Environment</b>	M6EMA46 M6EMS46	
 <b>Bacteria</b>	M61GA46 M61GS46	
 <b>Forensic</b>	M6TFA46 M6TFS46	



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