

# **Exosomal Marker Alix Antibody Set Kit**

Cat. Number: hEXOWBAlix-5

Stable for at least 6 MONTHS from the date of shipment.

For Research Use Only. Not For Use In Diagnostic Procedures.

#### **Products Information**

Products Included	Quantity	Mol. Wt.	Storage conditions	Isotype	Dilution
Anti-human Alix	125μL		2-8℃		1:300
mouse mAb	0.2mg/mL	95kD	DO NOT FREEZE	Mouse IgG <sub>2a</sub> , κ	(1:100-1:1,000)
Anti-mouse			2-8℃		1:3,000
IgG,HRP-linked mAb	25μL		DO NOT FREEZE	Rabbit IgG	(1:2,000-1:10,000)
5×SDS Sample Buffer II	250 μL		-20℃		
Exosome Positive  Control	100 μL		-20℃		

# **Product description**

The Exosomal Marker (Alix) Antibody Set Kit provides an economical means to evaluate the presence of exosomal markers. The kit includes enough primary antibody to perform at least 5 western blot experiments for each target. The secondary antibody that is included in this kit has been optimized to enhance the signal-to-noise ratio. We do not recommend using other secondary antibodies with the primary antibodies at this time.

# **Background**

Exosomes are small membrane-bound vesicles that in recent years have emerged as

important molecules for inter-cellular communication. Exosomes are produced during both normal and patho/physiological conditions, and cancer cells have been shown to secrete exosomes in greater amounts than normal cells.

Alix protein, named also ALG2 interacting protein or PDCD6-interacting protein, is a cytoplasmic protein that interacts with apoptosis associated-proteins. Alix plays an active role in exosome biogenesis and it is a useful internal marker for the analysis of exosomal proteins with western blotting.

### **Western Immunoblotting Protocol**

### A. Solutions and Reagents

- 1. 20X Phosphate Buffered Saline (PBS).
- 2. 10X Tris Buffered Saline (TBS).
- 3. 10X Tris-Glycine SDS Running Buffer.
- 4. 10X Tris-Glycine Transfer Buffer.
- 5. 10X Tris Buffered Saline with Tween® 20 (TBST).
- 6. Blocking Buffer: 1X TBST with 4% w/v nonfat dry milk.
- 7. Wash Buffer: 1X TBST
- 8. Primary Antibody Dilution Buffer: 1X TBST with 4% BSA
- 9. Blotting Membrane: This protocol has been optimized for nitrocellulose membranes. Pore size 0.45µm is generally recommended.
- 10. Secondary Antibody Dilution Buffer: 1X TBST with 4% BSA. Secondary Antibody Conjugated to HRP: anti-mouse IgG, HRP-linked mAb.
- 11. Detection Reagent: Clarity<sup>TM</sup>Western ECL Substrate(BIO-RAD Cat.#170-5056).

#### **B. Protein Blotting**

- 1. Lyse exosome samples by adding **5X SDS sample buffer II** (for 20μL sample,add 4μL **5X SDS sample buffer II**),mix well and **99°C for 10min**.
- 2. Microcentrifuge for 5 min. Load 20μL onto SDS-PAGE gel (10 cm x 10 cm).

**NOTE:** Loading of prestained molecular weight markers to verify electrotransfer and determine molecular weights are recommended.

- 3. Electrotransfer to nitrocellulose membrane.
- C. Membrane Blocking and Antibody Incubation.

**NOTE:** Volumes are for 10 cm x 10 cm (100 cm<sup>2</sup>) of membrane, for different sized membranes, adjust volumes accordingly.

- 1. (Optional) After transfer, wash nitrocellulose membrane with 25 ml TBS for 5 min at room temperature.
- 2. Incubate membrane in 25 ml of blocking buffer for 1 hr at roomtemperature.
- 3. Wash three times for 8min each with 15 ml of TBST.
- 4. Incubate membrane and primary antibody (at the appropriate dilution,1:300 (1:100-1:1,000)) in 7.5 ml primary antibody dilution buffer with gentle agitation at room temperature for 2h or overnight at  $4^{\circ}$ C.
- 5. Wash three times for 5 min each with 15 ml of TBST.
- 6. Incubate membrane with the Anti-mouse IgG,HRP-linked mAb (1:3,000(1:2,000-1:10,000) and in 10 ml of blocking buffer with gentle agitation for 1 hr at room temperature.
- 7. Wash three times for 5 min each with 15 ml of TBST.
- 8. Proceed with detection (Section D).

#### D. Detection of Proteins

- 1. Incubate membrane with 10 ml Clarity<sup>TM</sup>Western ECL Substrate (5 ml Reagent A, 5 ml Reagent B) with gentle agitation for 1 min at room temperature.
- 2. Drain membrane of excess developing solution (do not let dry), wrap in plastic wrap and expose to x-ray film or Chemiluminescence imager.

**NOTE:** Due to the kinetics of the detection reaction, signal is most intense immediately following incubation and declines over the following 2 hr.

#### **Related Products**

Exosome Isolation & Purification				
Exosome Extraction & Purification Kits (for blood serum/plasma)	EXORG10SP-1/ EXORG30SP-1/			
Exosome Concentration Kits (for cell culture media/urine)	EXOCon5-10/ EXOCon10-10			
	EXOMCUCD9-10			
Exosome Capture and Isolation Kits (for cell culture media/urine)	EXOMCUCD63-10			
	EXOMCUCD81-10			
<b>Exo-Antibody</b>				
Purified Anti-human Alix Antibody	RGAB100-50/RGAB100-100			
Purified Anti-human CD9 Antibody	RGAB101-50/RGAB101-100			

Anti-human CD9 Ab Biotin Conjugated	RGAB102-50/RGAB102-100			
Purified Anti-human CD63 Antibody	RGAB103-50/RGAB103-100			
Anti-human CD63 Ab Biotin Conjugated	RGAB104-50/RGAB104-100			
Purified Anti-human CD81 Antibody	RGAB105-50/RGAB105-100			
Anti-human CD81 Ab Biotin Conjugated	RGAB106-50/RGAB106-100			
Purified Anti-human TSG101 Antibody	RGAB107-50/RGAB107-100			
Purified Anti-human PD-L1 Antibody	RGAB108-50/RGAB108-100			
Anti-human PD-L1 Ab Biotin Conjugated	RGAB109-50/RGAB109-100			
Purified Anti-humanEpCAMAntibody	RGAB110-50/RGAB110-100			
Anti-human EpCAM Ab Biotin Conjugated	RGAB111-50/RGAB111-100			
Other Exosomal Markers Ab Set				
Exosomal Marker CD63 Antibody Set Kit	hEXOWBCD63-5			
Exosomal Marker CD81 Antibody Set Kit	hEXOWBCD81-5			
Exosomal Marker CD9 Antibody Set Kit	hEXOWBCD9-5			
Exosomal Marker Tsg101 Antibody Set Kit	hEXOWBTsg101-5			

# **Technical Support**

For more information about our products and to download manuals, please visit our web site: http://www.rengenbio.com

For additional information or technical assistance, please call or email us.

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**Exosome Research Exchange Group**