

DESCRIPTION	
<b>Species Reactivity</b>	Human/Mouse/Rat
<b>Specificity</b>	Detects human, mouse, and rat RAB27A in Western blots and detects recombinant human RAB27A in direct ELISAs. In direct ELISAs, less than 1% cross-reactivity with recombinant human RAB27B is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human RAB27A Ser135-Ala218 Accession # P51159
<b>Formulation</b>	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

**APPLICATIONS**  
**Please Note:** Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
<b>Western Blot</b>	0.5 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Simple Western</b>	5 µg/mL	See Below

**DATA**

**Western Blot**

**Detection of Human, Mouse, and Rat RAB27A by Western Blot.** Western blot shows lysates of K562 human chronic myelogenous leukemia cell line, 786-O human renal cell adenocarcinoma cell line, MCF-7 human breast cancer cell line, Jurkat human acute T cell leukemia cell line, Rat-2 rat embryonic fibroblast cell line, and Neuro-2A mouse neuroblastoma cell line. PVDF membrane was probed with 0.5 µg/mL of Sheep Anti-Human/Mouse/Rat RAB27A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7245) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for RAB27A at approximately 28 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**

**RAB27A in U937 Human Cell Line.** RAB27A was detected in immersion fixed U937 human histiocytic lymphoma cell line using Sheep Anti-Human/Mouse/Rat RAB27A Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7245) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Sheep IgG Secondary Antibody (red; Catalog # NL010) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

**Simple Western**

**Detection of Human Rab27a by Simple Western™.** Simple Western lane view shows lysates of K562 human chronic myelogenous leukemia cell line, loaded at 0.2 mg/mL. A specific band was detected for Rab27a at approximately 32 kDa (as indicated) using 5 µg/mL of Sheep Anti-Human/Mouse/Rat Rab27a Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7245) followed by 1:50 dilution of HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Sterile PBS to a final concentration of 0.2 mg/mL.
<b>Shipping</b>	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
<b>Stability &amp; Storage</b>	<b>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</b> <ul style="list-style-type: none"><li>● 12 months from date of receipt, -20 to -70 °C as supplied.</li><li>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.</li><li>● 6 months, -20 to -70 °C under sterile conditions after reconstitution.</li></ul>

## BACKGROUND

RAB27A (Ras-related protein Rab 27A; also GTP-binding protein Ram) is a 27-28 kDa member of the Rab27 subfamily, Rab family, Small GTPase superfamily of proteins. It is widely expressed, and found in cells diverse as mast cells, cytotoxic T cells, melanocytes, retinal pigment epithelium and pancreatic  $\beta$ -cells. RAB27A plays a key role in the secretion of specialized lysosomes termed secretory lysosomes. In melanocytes, for example, RAB27A is incorporated into the melanosome membrane where it serves as a docking factor for melanophilin and myosin-Va, regulating melanosome transport to, and concentration at, sites of release. Human RAB27A is 221 amino acids (aa) in length. It contains multiple Rab family and subfamily motifs, and concludes with a C-terminal CXC prenylation sequence (aa 219-221). There is one potential splice variant that shows a deletion of aa 146-153. Over aa 135-218, human RAB27A shares 92% and 94% aa sequence identity with mouse Rab27A and rat RAB27A, respectively.