

## DESCRIPTION

<b>Species Reactivity</b>	Human/Mouse
<b>Specificity</b>	Detects human and mouse PUM1 in direct ELISAs and Western blots. In direct ELISAs, less than 5% cross-reactivity with recombinant human PUM2 is observed.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human PUM1 Pro230-Ala372 Accession # Q14671
<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>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

**Western Blot**

**Detection of Human and Mouse PUM1 by Western Blot.** Western blot shows lysates of IMR-32 human neuroblastoma cell line, Neuro-2A mouse neuroblastoma cell line, SW480 human colorectal adenocarcinoma cell line, EL-4 mouse lymphoblast cell line, and Raji human Burkitt's lymphoma cell line. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human/Mouse PUM1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7628) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). Specific bands were detected for PUM1 at approximately 130-140 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Immunocytochemistry**

**PUM1 in HeLa Human Cell Line.** PUM1 was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Sheep Anti-Human/Mouse PUM1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7628) 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 Cells on Coverslips](#).

## 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

PUM1 (Pumilio homolog 1/Pumilio-1) is a 130-140 kDa member of the PUF (PUMilio and FBF) family of RNA-binding proteins. It is ubiquitously expressed, and appears to be involved in cell cycle regulation. Among other things, PUM1 is known to bind to the 3' UTR of p27 mRNA following cell activation. This results in a conformational change in the p27 transcript, allowing for miRNA binding and translational repression, followed by a decline in p27 availability and entry into S-phase of the cell cycle. Human PUM1 is 1186 amino acids (aa) in length. It contains N-terminal Ala-, Gln- and Ser-rich regions (aa 393-815), one PUM-HD region (aa 828-1168) and eight consecutive pumilio repeats (aa 726-1142). There are six utilized Ser/Thr phosphorylation sites, and at least three isoform variants. One contains a five aa insert after Gly418, a second possesses an alternative start site 36 aa upstream of the standard site, and a third shows a deletion of aa 597-623 coupled to a two aa insertion after Gln950. Over aa 230-372, human PUM1 is identical to mouse PUM1 in amino acid sequence. Overall, human and mouse PUM1 share 99% aa sequence identity.