

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Calreticulin in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human Calreticulin Met1-Asn180 Accession # P27797
<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.

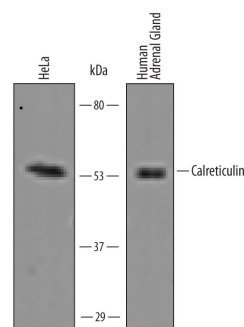
## APPLICATIONS

**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.

	<b>Recommended Concentration</b>	<b>Sample</b>
<b>Western Blot</b>	1 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below
<b>Immunohistochemistry</b>	5-15 µg/mL	See Below
<b>Simple Western</b>	10 µg/mL	See Below

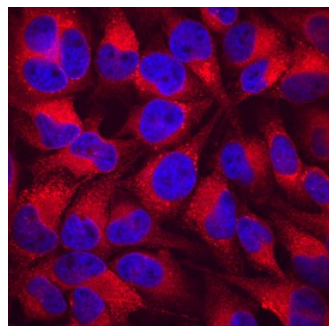
## DATA

### Western Blot



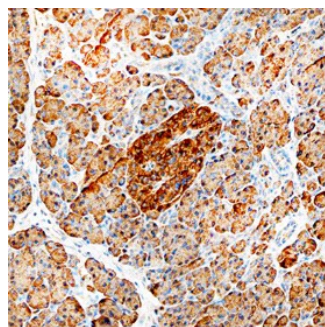
**Detection of Human Calreticulin by Western Blot.** Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and human adrenal gland tissue. PVDF Membrane was probed with 1 µg/mL of Human Calreticulin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3898) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for Calreticulin at approximately 55 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 8.

### Immunocytochemistry



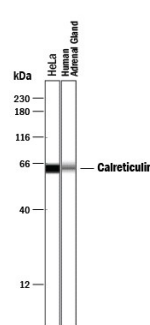
**Calreticulin in HeLa Human Cell Line.** Calreticulin was detected in immersion fixed HeLa human cervical epithelial carcinoma cell line using Goat Anti-Human Calreticulin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3898) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the Northern-Lights™ 557-conjugated Anti-Goat IgG Secondary Antibody (red; Catalog # NL001) and counterstained with DAPI (blue). Specific staining was localized to endoplasmic reticula. View our protocol for [Fluorescent ICC Staining of Cells on Coverslips](#).

### Immunohistochemistry



**Calreticulin in Human Pancreas.** Calreticulin was detected in immersion fixed paraffin-embedded sections of human pancreas using Goat Anti-Human Calreticulin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3898) at 3 µg/mL overnight at 4 °C. Before incubation with the primary antibody, tissue was subjected to heat-induced epitope retrieval using Antigen Retrieval Reagent-Basic (Catalog # CTS013). Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to islet cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

### Simple Western



**Detection of Human Calreticulin by Simple Western™.** Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line and human adrenal gland tissue, loaded at 0.2 mg/mL. A specific band was detected for Calreticulin at approximately 63 kDa (as indicated) using 10 µg/mL of Goat Anti-Human Calreticulin Antigen Affinity-purified Polyclonal Antibody (Catalog # AF3898) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). 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

Human Calreticulin is a 55-60 kDa, 400 amino acid (aa), variably glycosylated intra- and extracellular Ca<sup>++</sup>-binding lectin that is ubiquitously expressed. It consists of three domains: a 180 aa N-terminal globular region, a 111 aa P-, or proline rich domain, and a 109 aa C-terminus. The 180 aa N-terminus (aa 18-197) is termed Vasostatin. It is unclear if it is ever generated naturally via proteolytic processing. Vasostatin domain has many functions. It binds to RNA (aa 18-27), has autocatalytic phosphorylase activity (aa 77-197), binds to a KxFFKR motif on steroid hormone receptors, and serves as a lectin-type chaperone for ER localized molecules. It also shows anti-angiogenic activity, presumably by binding to laminin carbohydrates and blocking endothelial cell adhesion and proliferation. Human Calreticulin is 94% aa identical to mouse and rat Calreticulin.