

## DESCRIPTION

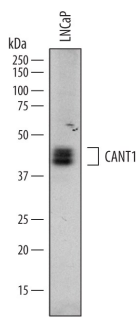
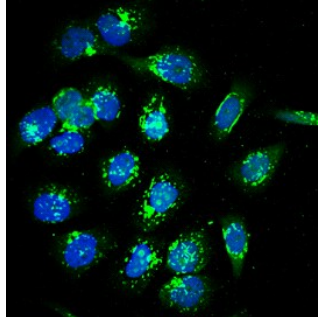
<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Calcium Activated Nucleotidase 1/CANT1 in direct ELISAs.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Calcium Activated Nucleotidase 1/CANT1 Gly80-Ile401 Accession # Q8WVQ1
<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>	0.2 µg/mL	See Below
<b>Immunocytochemistry</b>	5-15 µg/mL	See Below

## DATA

<p><b>Western Blot</b></p>  <p><b>Detection of Human Calcium Activated Nucleotidase 1/CANT1 by Western Blot.</b> Western blot shows lysates of LNCaP human prostate cancer cell line. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human Calcium Activated Nucleotidase 1/CANT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6720) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Calcium Activated Nucleotidase 1/CANT1 at approximately 40-45 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunocytochemistry</b></p>  <p><b>Calcium Activated Nucleotidase 1/CANT1 in PC-3 Human Cell Line.</b> Calcium Activated Nucleotidase 1/CANT1 was detected in immersion fixed PC-3 human prostate cancer cell line using Sheep Anti-Human Calcium Activated Nucleotidase 1/CANT1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6720) at 10 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 637-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # NL011) and counterstained with DAPI (blue). Specific staining was localized to perinuclei. View our protocol for <a href="#">Fluorescent ICC Staining of Cells on Coverslips</a>.</p>
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## 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

CANT1 (soluble Calcium-Activated Nucleotidase 1; also SCAN-1, Apyrase homolog and NFκB-activating protein 107) is a 45-48 kDa glycoprotein member of the apyrase (ADP/ATP hydrolysing) family of molecules. It is an ER and Golgi-embedded protein that hydrolyzes UDP in a calcium-dependent manner, and appears to be involved in the regulation of protein glycosylation and folding. It is also reported that CANT1 is essential for cell proliferation. CANT1 is not ubiquitous, but is found in multiple cell types, including prostatic epithelium, fibroblasts, lymphocytes and chondrocytes. Human CANT1 is a 401 amino acid (aa) type II transmembrane glycoprotein. It contains a 44 aa N-terminal cytoplasmic region that possesses an ER retention motif (aa 38-42), and a 339 aa luminal domain (aa 63-401). CANT1 is reported to form membrane-bound disulfide-linked homodimers, and potentially form non-covalent homodimers in a soluble (circulating) state. The soluble form is 35-40 kDa in size, and presumably cleaved near the transmembrane segment. However, multiple splice forms are possible, and may account for the lower MWs. Two splice forms impact the extracellular region, one which contains a four aa substitution for aa 219-401, and a second that possesses a 26 aa substitution for aa 220-401. Two additional splice forms utilize alternative start sites at Met 31 and Met165. Over aa 80-401, human CANT1 shares 89% aa sequence identity with mouse CANT1.