

#### DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human CapG in direct ELISAs and Western blots.
<b>Source</b>	Polyclonal Sheep IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	<i>E. coli</i> -derived recombinant human CapG Met1-Lys348 Accession # P40121
<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 CapG by Western Blot.</b> Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line, MOLT-4 human acute lymphoblastic leukemia cell line, and human kidney tissue. PVDF membrane was probed with 0.2 µg/mL of Sheep Anti-Human CapG Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7177) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for CapG at approximately 41 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.</p>	<p><b>Immunocytochemistry</b></p> <p><b>CapG in U937 Human Cell Line.</b> CapG was detected in immersion fixed U937 human histiocytic lymphoma cell line using Sheep Anti-Human CapG Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7177) 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 <a href="#">Fluorescent ICC Staining of Non-adherent Cells</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

CapG ("Caps" barbed actin ends and resembles Gelsolin; also Macrophage capping protein/MCP and actin regulatory protein Cap-G) is a 40-42 kDa member of the Villin/Gelsolin family of proteins. It is expressed by macrophages/monocytes and endothelial cells, and is found in both cytoplasm and nucleus. It appears to be involved in cell motility, and is known to bind to (but not cleave) actin filament ends in a calcium-dependent manner. This regulates the growth of actin filaments. Human CapG is 348 amino acids (aa) in length. It contains an N-terminal gelsolin repeat (aa 27-75), followed by a NLS (aa 137-146), two consecutive gelsolin-like repeats (aa 148-188 and 261-307), and one utilized phosphorylation site at Ser337. There is at least one potential isoform variant that contains a deletion of aa 64-84. Full-length human CapG shares 91% aa sequence identity with mouse CapG.