

## DESCRIPTION

<b>Species Reactivity</b>	Human
<b>Specificity</b>	Detects human Cystatin E/M in direct ELISAs and Western blots. In direct ELISAs, approximately 25% cross-reactivity with recombinant mouse Cystatin E/M is observed.
<b>Source</b>	Polyclonal Goat IgG
<b>Purification</b>	Antigen Affinity-purified
<b>Immunogen</b>	Mouse myeloma cell line NS0-derived recombinant human Cystatin E/M Arg29-Met149 Accession # Q15828
<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.

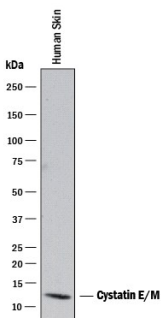
## APPLICATIONS

**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>Immunohistochemistry</b>	5-15 µg/mL	Immersion fixed paraffin-embedded sections of human skin
<b>Immunoprecipitation</b>	25 µg/mL	Conditioned cell culture medium spiked with Recombinant Human Cystatin E/M (Catalog # 1286-PI), see our available <a href="#">Western blot detection antibodies</a>
<b>Simple Western</b>	50 µg/mL	See Below

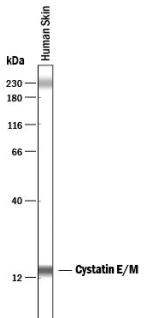
## DATA

**Western Blot**



**Detection of Human Cystatin E/M by Western Blot.** Western blot shows lysates of human skin tissue. PVDF membrane was probed with 1 µg/mL of Goat Anti-Human Cystatin E/M Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1286) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF017). A specific band was detected for Cystatin E/M at approximately 13 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

**Simple Western**



**Detection of Human Cystatin E/M by Simple Western™.** Simple Western lane view shows lysates of human skin tissue, loaded at 0.2 mg/mL. A specific band was detected for Cystatin E/M at approximately 13 kDa (as indicated) using 50 µg/mL of Goat Anti-Human Cystatin E/M Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1286) 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. Non-specific interaction with the 230 kDa Simple Western standard may be seen with this antibody.

## PREPARATION AND STORAGE

<b>Reconstitution</b>	Reconstitute at 0.2 mg/mL in sterile PBS.
<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

Cystatin E/M encoded by the CST6 gene is a member of family 2 of the cystatin superfamily (1, 2). It inhibits papain and cathepsin B, two of the cysteine proteases. Its mRNA was found in many tissues by the two groups who did initial cloning (1, 2). However, its protein was found only in skin and sweat glands by a third group (3). In addition to being a cysteine protease inhibitor, cystatin E/M is also a substrate for transglutaminases (3). It is required for viability and for correct formation of cornified layers in the epidermis and hair follicles, as *ichq* mice, with a null mutation in the cystatin E/M gene, have defects in epidermal cornification and die between 5 and 12 days of age (4). Cystatin E/M expression and function may not be limited to cutaneous epithelia. For example, it is found in rat brain and is induced during neuronal cell differentiation (5).

### References:

1. Sotiropoulou, G. *et al.* (1997) *J. Biol. Chem.* **272**:903.
2. Ni, J. *et al.* (1997) *J. Biol. Chem.* **272**:10853.
3. Zeeuwen, P.L. *et al.* (2001) *J. Invest. Dermatol.* **116**:693.
4. Zeeuwen, P.L. *et al.* (2002) *Hum. Mol. Genet.* **11**:2867.
5. Hong, J. *et al.* (2002) *J. Neurochem.* **81**:922.