

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human Carboxypeptidase M in direct ELISAs and Western blots. In direct ELISAs, less than 1% cross-reactivity with recombinant human CPE is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human Carboxypeptidase M Leu18-Ser423 Accession # P14384
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied either lyophilized or as a 0.2 µm filtered solution in PBS.

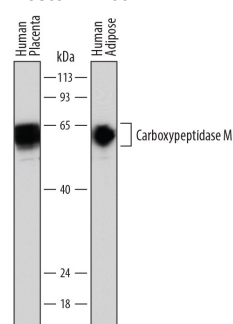
APPLICATIONS

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
Western Blot	1 µg/mL	See Below
Immunocytochemistry	3-15 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below

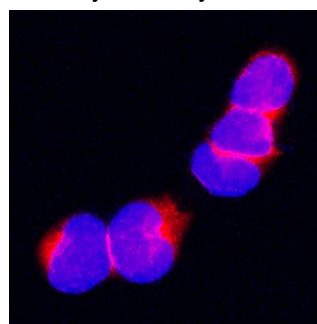
DATA

Western Blot



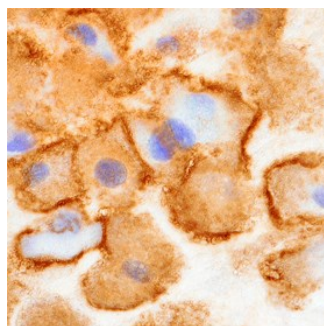
Detection of Human Carboxypeptidase M by Western Blot. Western blot shows lysates of human placenta tissue and human adipose tissue. PVDF membrane was probed with 1 µg/mL of Sheep Anti-Human Carboxypeptidase M Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7457) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for Carboxypeptidase M at approximately 58-65 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Carboxypeptidase M in THP-1 Human Cell Line. Carboxypeptidase M was detected in immersion fixed THP-1 human acute monocytic leukemia cell line using Sheep Anti-Human Carboxypeptidase M Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7457) at 15 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 plasma membrane and cytoplasm. View our protocol for [Fluorescent ICC Staining of Non-adherent Cells](#).

Immunohistochemistry



Carboxypeptidase M in Human Placenta. Carboxypeptidase M was detected in immersion fixed paraffin-embedded sections of human placenta using Sheep Anti-Human Carboxypeptidase M Antigen Affinity-purified Polyclonal Antibody (Catalog # AF7457) at 10 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-Sheep HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS019) and counterstained with hematoxylin (blue). Specific staining was localized to the plasma membrane of decidual cells. View our protocol for [Chromogenic IHC Staining of Paraffin-embedded Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Sterile PBS to a final concentration of 0.2 mg/mL.
Shipping	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
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> • 12 months from date of receipt, -20 to -70 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

CPM (Carboxypeptidase M) is a 50-65 kDa monomer that belongs to the regulatory CPN/E subfamily, peptidase M14 family of enzymes. It is widely expressed, being found on macrophages, fibroblasts, endothelial cells, oligodendrocytes and Schwann cells, dendritic cells, osteoblasts and bronchial epithelium. CPM is a GPI-linked glycoprotein that is best known as a peptidase that cleaves basic amino acids (aa) from the carboxyterminal of a number of peptides, including EGF and bradykinin. It is also known to bind to apparent substrates and undergo a conformational change that links it with the kinin B1 GPCR, initiating signal transduction. Mature human CPM is 406 aa in length (aa 18-423). It contains one large enzymatic region (aa 19-310) and two critical glutamic acid residues at Glu260 and Glu264. Like many GPI-linked proteins, CPM undergoes solubilization and is reportedly found in urine and amniotic fluid. Over aa 18-423 (mature CPM), human CPM shares 86% aa sequence identity with mouse CPM.