

DESCRIPTION	
Species Reactivity	Human
Specificity	Detects human RAMP1 in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant mouse RAMP1 is observed and less than 1% cross-reactivity with recombinant human (rh) RAMP2 and rhRAMP3 is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant human RAMP1 Cys27-Ser117 Accession # O60894
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 as a 0.2 µm filtered solution in PBS.

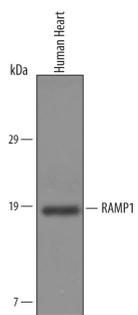
APPLICATIONS

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
Immunohistochemistry	5-15 µg/mL	See Below

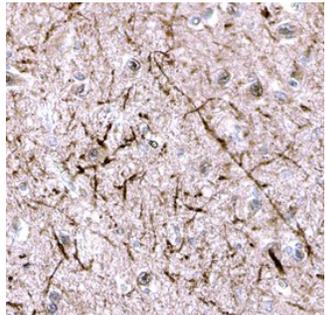
DATA

Western Blot



Detection of Human RAMP1 by Western Blot. Western blot shows lysates of human heart tissue. PVDF Membrane was probed with 1 µg/mL of Sheep Anti-Human RAMP1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6428) followed by HRP-conjugated Anti-Sheep IgG Secondary Antibody (Catalog # HAF016). A specific band was detected for RAMP1 at approximately 17 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



RAMP1 in Human Brain. RAMP1 was detected in immersion fixed paraffin-embedded sections of human brain (hypothalamus) using Sheep Anti-Human RAMP1 Antigen Affinity-purified Polyclonal Antibody (Catalog # AF6428) 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 neuronal and glial processes. 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

RAMP1 (receptor activity modifying protein 1) is a 14-18 kDa member of the RAMP family of proteins. Variability in MW is due to the absence, or presence, of intramolecular disulfide bonds that form in the ER and Golgi. It is expressed on/in neurons, vascular endothelial cells, visceral and vascular smooth muscle cells, mammary epithelium, osteoblasts and cardiomyocytes. RAMP1 interacts with CRLR/CLR to form an 84 kDa noncovalent receptor complex for CGRP and AM, and with CTR to form a 76 kDa receptor complex for amylin. Mature human RAMP1 is a 122 amino acid (aa) nonglycosylated type I transmembrane protein that contains a 91 aa extracellular domain (ECD) (aa 27-117) plus a ten aa cytoplasmic tail. In the ECD, residues 78-90 bind AM, while residues 91-103 bind CGRP. In the absence of CRLR and CTR, RAMP1 will form 30-32 kDa disulfide-linked homodimers in the ER/Golgi. Over aa 27-117, human RAMP1 shares 65% aa identity with mouse RAMP1.