

**Human Adrenomedullin (ADML)**

Cat. # ADML15-P      Human Adrenomedullin (1-52) Peptide      **SIZE:**    100 ug      500 ug      1 mg

The calcitonin family of bioactive peptides comprises of **calcitonin**, **amylin**, two calcitonin-gene related peptides (**CGRP1**, and **CGRP2**) and adrenomedullin (**ADM**). **Adrenomedullin** (ADM) is a 52-aa hypotensive peptide. It has structural similarity with CGRP and amylin. ADM is produced in peripheral tissues, adrenal medulla, lung, and kidney. ADM has specific receptors on astrocytes and it is unregulated in ischaemia. The calcitonin family peptides probably act through G-protein coupled membrane receptors. Recently, a homolog of calcitonin receptor, **CRLR** (calcitonin-receptor-like receptor human 461 aa; rat/mouse 463 aa) was identified. It is now shown that CRLR can function as either a CGRP receptor or an ADM receptor, depending upon which members of a new family of proteins called receptor activity modifying proteins (**RAMP1-3**) are expressed.

AM and PAMP are potent hypotensive and vasodilator agents. Numerous actions have been reported most related to the physiologic control of fluid and electrolyte homeostasis. In the kidney, am is diuretic and natriuretic, and both am and pamp inhibit aldosterone secretion by direct adrenal actions. In pituitary gland, both peptides at physiologically relevant doses inhibit basal ACTH secretion. Both peptides appear to act in brain and pituitary gland to facilitate the loss of plasma volume, actions which complement their hypotensive effects in blood vessels.

**SUBCELLULAR LOCATION:** Secreted.

**TISSUE SPECIFICITY:** Highest levels found in pheochromocytoma and adrenal medulla. Also found in lung, ventricle and kidney tissues.

(ADM)ADM precursor [Contains: Adrenomedullin (AM); Proadrenomedullin N-20 terminal peptide (ProAM-N20) (ProAM N-terminal 20 peptide) (PAMP)].

**Source of Antigen**

Human ADML (52-aa) was synthesized and purified by hplc (>99%),

<b>Sequence</b>	Tyr-Arg-Gln-Ser-Met-Asn-Asn-Phe-Gln-Gly-Leu-Arg-Ser-Phe-Gly-Cys-Arg-Phe-Gly-Thr-Cys-Thr-Val-Gln-Lys-Leu-Ala-His-Gln-Ile-Tyr-Gln-Phe-Thr-Asp-Lys-Asp-Lys-Asp-Asn-Val-Ala-Pro-Arg-Ser-Lys-Ile-Ser-Pro-Gln-Gly-Tyr-NH <sub>2</sub>
<b>1-52 aa Human ADML</b>	
<b>Purity</b>	99%
<b>Mol Wt</b>	6028.8
<b>Notes</b>	Cys16-Cys21
<b>Solubility</b>	Water

**Form & Storage**

Human DML is supplied at 1 mg/ml in water in either liquid or lyophilized form. Powder can be dissolved in water to prepare at stock of 1mg/ml. Working dilutions can be in the required buffer.

Store at -20oC (liquid or powder). Do not store working dilutions of the peptide.

Powder is stable for up to 6 months at -20oC. Liquid can be stored for ~3-6 months when kept at -20oC.

**Storage**

**Short-term:** unopened, undiluted vials for less than a week at 4oC.

**Long-term:** at -20C or below in suitable aliquots after reconstitution. Do not freeze and thaw and store working, diluted solutions.

**Stability:** up to 6months at -20oC or below.

**Shipping:** 4oC for solutions and room temp for powder.

**General References:**

(1). Kitamura K et al (1993) BBRC 194, 720; Kitamura H et al (1993) BBRC 192, 553; Samson Wk et al (1998) Front. Neuroendocrinol. 19, 100; Champion HC et al (1999) Regul. Pept. 85, 1; McLatchie LM et al (1998) Nature 393, 333-339; Nagae T et al (2000) BBRC 270, 89-93; Husmann, K et al (2000); Mol Cell Endocrinol (2000) 162, 35-43.

**Citations of ADI's antibodies for CRLR and RAMP** (see updated list at: [www.4adi.com/vlr/rampflr.html](http://www.4adi.com/vlr/rampflr.html) )

\*This product is for In vitro research use only.

**Related material available from ADI**

Antibodies RAMP1-3, Amylin, calcitonin, CGRP, Adrenomedullin, CRLR

ADML15-P

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