ALPHA DIAGNOSTIC INTERNATIONAL

Product Specification Sheet

Life Technologies™ Your Molecular & Cell Technology Partner

Adrenomedullin (ADML) Antibodies

Cat. # ADML11-P	Human Adrenomedullin Control Peptide **FORM:** Soln Lyophilized	**SIZE**: 100 ug
Cat. # ADML11-S	Rabbit Anti-Human Adrenomedullin antiserum **FORM**: Soln Lyophilized.	**SIZE**: 100 ul
Cat. # ADML11-A	Rabbit Anti-Human Adrenomedullin, Ig G Aff pure **FORM**: Soln Lyophilized.	**SIZE**: 100 ug

The calcitonin family of bioactive peptides comprises of **calcitonin**, **amylin**, two calcitonin-gene related peptides (**CGRP1**, and **CGRP2**) and adrenomedullin (**ADM**). **Calcitonin** is 32 aa peptide found in the parafollicular "C" cells of the thyroid in mammals. It is also found in a number of non-mammals. It regulated the mineral (calcium and phosphate) balance. Calcitonin causes hypercalcemia by acting as an inhibitor of osteoclast induced bone resorption. **CGRP** is a 37-aa peptide produced by tissue specific processing of the calcitonin gene. Calcitonin is the major product in the thyroid, whereas CGRP is the major product in neural tissues. CGRP is a potent cardiovascular agent. It has structural similarity with amylin. CGRP is found in two isoforms (CGRP-I and CGRP-II) that differs only by 3 amino acids. **Amylin** is a 37-aa peptide produced in the pancreatic beta-cell secretory granules and is co-released with insulin. Amylin also has CGRP-like effects on bone metabolism. Amylin has specific binding sites in the CNS and it may regulate gastric emptying and influence carbohydrate metabolism. **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.

Source of Antigen and Antibodies

Antigen	17aa peptide of Human ADML; **Designated (ADML11-P or control peptide).**
Location	~C-terminus
Ab Host/type	Rabbit, polyclonal
Ab Format	Unpurified antiserum (cat #ADML11-S) Aff pure IgG (**cat #ADML11-A**)

Form & Storage

Antiserum (unpurified, undiluted)

100 ul/vial solution — 50 ul/vial lyophilized powder

contains 0.05% sodium azide

Reconstitute in the original vol. of water

Affinity pure IgG

100 ug/100ul solution — 50 ug/50 ul lyophilized powder

Buffer: 100 mM Tris, pH 7.5, 0.2% BSA

contains 0.05% sodium azide

Reconstitute in the original vol. of water

Control/blocking peptide

100 ug/100 ul solution — lyophilized powder

Buffer: PBS, pH 7.5 and 0.05% sodium azide

Reconstitute in the original vol. **O**f water

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: 6-12 months at –20oC or below.
Shipping: 4oC for solutions and room temp for powder.

Recommended Usage

Western Blotting (1:1K-5K for neat serum and 1-10 ug/ml for affinity pure antibody using ECL technique).

ELISA: Control peptide can be used to coat ELISA plates at 1 ug/ml and detected with antibodies (1:10-50K for neat serum and 0.5-1 ug/ml for affinity pure).

Histochemistry & Immunofluorescence: Not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues.

Specificity & Cross-reactivity

The human ADML11-P is quite conserved in various species: pig, canine (94%), rat (93%), bovine (87%), and mouse (76%). No significant sequence homology was found with other calcitonin family of peptides. Antibody cross-reactivity in various species has not been studied. The ADML11-P control peptide, because of its low mol. Wt (<3 kDa), is not suitable for Western. It should be used for ELISA or antibody blocking experiments (use 5-10 ug control peptide per 1 ug of aff pure IgG or 1 ul antiserum) to confirm antibody specificity (see detailed protocol at: www.4adi.com\data\abblock.html).

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\flr\rampflr.html)

*This product is for In vitro research use only.

Related material available from ADI

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com
☎ (800) 786-5777; (210) 561-9515; **Fax**: (210) 561-9544; **Web Site**: www.4adi.com

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

(ADML11-S . Rev. 40204S)

Alpha Diagnostic Intl Inc., 6203 Woodlake Center Dr, San Antonio, TX 78244, USA; **Email**: service@4adi.com

India Contact:

Life Technologies (India) Pvt. Ltd.

306, Aggarwal City Mall, Opposite M2K Pitampura, Delhi – 110034 (INDIA). Ph: +91-11-42208000, 42208111, 42208222, Mobile: +91-9810521400, Fax: +91-11-42208444

Email: customerservice@lifetechindia.com Website: www.lifetechindia.com