

Product Specification Sheet

Calcitonin Receptor Like Receptor (CRLR) Antibodies

Cat. # CRLR11-P	Rat CRLR Control/blocking Peptide	SIZE: 100 ug
Cat. # CRLR11-S	Rabbit Anti-Rat CRLR antiserum	SIZE: 100 ul
Cat. # CRLR11-A	Rabbit Anti-Rat CRLR IgG (aff pure)	SIZE: 100 ug

The calcitonin family peptides probably act through G-protein coupled membrane receptors. The gene for calcitonin receptors has been cloned. It is homologous to GPCRs in family "B" which typically recognizes regulatory peptides (secretin, glucagons, VIP). Recently, a homolog of calcitonin receptor, **CRLR** (calcitonin-receptor-like receptor, human 461 aa; rat/mouse 463 aa; also known as **CGRP type 1 receptor**) was identified. CRLR has 55% homology with calcitonin receptor. 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.

FUNCTION: Receptor for calcitonin-gene-related peptide (CGRP) together with RAMP1 and receptor for adrenomedullin together with RAMP2 or RAMP3 (By similarity). The activity of this receptor is mediated by G proteins which activate adenylyl cyclase (By similarity).

SUBUNIT: Heterodimer of CALCRL and RAMP1, RAMP2 or RAMP3 (By similarity).

SUBCELLULAR LOCATION: Cell membrane; Multi-pass membrane protein.

SIMILARITY: Belongs to the G-protein coupled receptor 2 family

Protein name Calcitonin gene-related peptide type 1 receptor [Precursor]; **Synonyms** CGRP type 1 receptor, Cgrpr, Calcitonin receptor-like receptor

Gene name Name: Calcrl

Source of Antigen and Antibodies

Antigen	20aa peptide of rat CRLR/AALRL (protein accession #Q63118, refs1); Designated (CRLR11-P or control peptide) conjugated to KLH; Location:~C-terminus, Cytoplasmic
Ab Host/type	Rabbit, polyclonal Unpurified antiserum (cat #CRLR11-S) or Aff pure IgG (cat #CRLR11-A) purified over antigen-agarose column
2-ab	Goat Anti-rabbit IgG-HRP cat # 20320 (AP, biotin, FITC conjugates also available)
-ve control IgG	# 20009-1, Rabbit (non-immune) IgG, purified, suitable for ELISA, Western, IHC as -ve control

Form & Storage of Antibodies/Peptide Control

Antiserum (unpurified)

100ul solution lyophilized powder
Supplied in Buffer: 0.05% azide
Reconstitute powder in 100 ul PBS

Affinity pure IgG

100 ug/100ul solution lyophilized powder
Supplied in **Buffer:** PBS+0.1% BSA
Reconstitute powder in PBS at 1mg/ml

Control/blocking peptide

100 ug/100 ul solution lyophilized powder

Supplied in Buffer: PBS pH 7.5,
Reconstitute powder in PBS at 1 mg/ml.

Storage

Short-term: unopened, undiluted liquid vials at -20OC and powder at 4oC or -20oC..

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). see published refs 2).

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: We recommend the use of affinity purified antibody at 2-20 ug/ml in paraformaldehyde fixed sections of tissues. (see published refs 2).

Specificity & Cross-reactivity

The CRLR11-P peptides is 90% conserved in mouse and 70% in human/chimp, 64% in pig, CRLR. However, no significant sequence homology is detected with other GPCR. Antibody cross-reactivity in various species has not been studied. The CRLR11-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). Njuki et al (1993) Clin. Sci. 85, 385-388; Aiyar N et al (1996) 271, 11325-11329; Fluhmann B et al (1995) BBRC 206, 341-347; McLatchie LM et al (1998) Nature 393, 333-339; Nagae T et al (2000) BBRC 270, 89-93; Chakravarty p et al (2000) Br J. Pharmacol. 130, 189-195; Aldecoa A et al (2000) FEBS Lett. 471, 156; Husmann, K et al (2000); Mol Cell Endocrinol (2000) 162, 35

Citations of ADI's antibodies for CRLR (updated list at: www.4adi.com/flr/rampflr.html)

Mallee JJ 2002	J. Biol. Chem. 277, 14294-24298
Li J 2003	J. Hypertension. 21(3):577-582
Wang Y 2007	J. Pharmacol. Exp. Ther.,
Kawase T2003	Eur. J. Pharmacol., 470, 125-137
Marquez-Rodas I 2006	Regulatory Peptides, 134, 61-66
Li J 2002	Hypertension, 41, 757-762
Wang X 2003	J. Hypertension. 21(6):1171-1181

*This product is for In vitro research use only.

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