

Product Specification Sheet

Urotensin II (UII) Antibodies

Cat. UT21-S	Rabbit Anti-Rat UII Antiserum	SIZE: 100 ul
Cat. UT21-A	Rabbit Anti- Rat UII IgG (affinity pure)	SIZE: 100 ug
Cat. UT21-P	Rat UII Control/blocking peptide	SIZE: 100 ug

Urotensins are neuropeptide secreted from the urophysis in the caudal neurosecretory system of the fishes. Two bioactive Urotensins, U1 and UII have been cloned from various species including mammals. U1 is 41 aa peptide, which showed prolonged hypotensive effects in mammals. It is structurally similar to mammalian corticotropin-releasing factor. **UII** is a vasoactive 'somatostatin-like' 12-aa cyclic peptide with similarity to somatostatin-14. Human UII is composed of only 11 aa residues, while fish and frog UII possess 12 and 13 aa, respectively. The cyclic region of the UII, which is responsible for the biological activity of the peptide, has been fully conserved from fish to human. UII expression has been observed predominantly in the spinal cord.

Recently, an orphan human G-protein coupled receptor homologous to rat GPR14 has been identified as the receptor for UII (2). **GPR14** is expressed predominantly in cardiovascular tissue. Human UII effectively stimulated total peripheral resistance in anesthetized non-human primates, a response associated with profound cardiac contractile dysfunction. GPR14 (rat 386 aa and human 389 aa, ~75% homology) contains 7 transmembrane domains. It is most closely related to somatostatin receptor4. GPR14 is mostly expressed in the heart and pancreas, while low expression was detected in the brain.

Source of Antigen and Antibodies

Antigen	14-aa cyclic peptide from rat UII (1) ; Designation (#UT21-P, control or blocking peptide) conjugated to KLH; epitope location ~ C-terminus
Ab Host/type	Rabbit, Polyclonal unpurified antiserum (#UT21-S) and IgG, purified over antigen-agarose (Cat # UT21-A)
2-Ab	Cat # 20320, goat anti-rabbit IgG-HRP (AP, biotin, FITC conjugates also available).
-	# 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 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

ELISA (1:10K-1:100K; using 50-100 ng control peptide/well).

Histochemistry & Immunofluorescence: not tested. We recommend the use of affinity purified antibody at 2-20 ug/ml in formaldehyde fixed tissue.

Specificity & Cross-reactivity

The rat UT21-P control peptide sequence is 93% conserved in mouse, 77% in human, 66% in frog, and 53% in various fishes UII. No appreciable homology of U21-P is seen with other peptides. Antibody crossreactivity in various species is not established. 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 the web site).

General References: (1) Coulouran Y et al (1999) FEBS Lett. 457, 28-32; Coulouran Y et al (1999) Proc. Natl. Acad. Sci. 95, 15803-15808; Ames RS et al (1999) Nature 401, 282-286; Marchese A et al (1995) Genomics 29, 335-344; Tal M et al (1995) BBRC 209, 752-759

*This product is for in vitro research use only.

Related material available from ADI

Study distribution of proteins in 12 regions of rat/mouse brain using **ReadyBrain Blots**

UT21-S-A-P 71208A

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