## **PRODUCT** INFORMATION



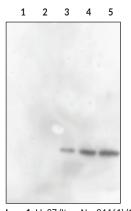
Citrullinated LL-37 Monoclonal Antibody (Clone 6A8)

Item No. 26739

### **Overview and Properties**

Contents: Synonyms: Immunogen:	This vial contains 300 μg of protein G-purified monoclonal antibody. Antibacterial Peptide LL-37, Antibacterial Protein LL-37 Citrullinated human LL-37 peptide
<b>Cross Reactivity:</b>	(+) Citrullinated LL-37; (-) Native LL-37
Species Reactivity	: (+) Human
Uniprot No.:	P49913
Form:	Liquid
Storage:	-20°C (as supplied)
Stability:	≥3 years
Storage Buffer:	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Clone:	6A8
Host:	Mouse
Isotype:	lgG1
Applications:	ELISA and Western blot (WB); the recommended starting dilution for ELISA and WB is 1:500-1,000. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

#### Images



Lane 1: LL-37 (Item No. 24461) (100 ng) Lane 2: LL-37 (Item No. 24461) (200 ng) Lane 3: Citrullinated LL-37 Peptide (Item No. 30987) (50 ng) Lane 4: Citrullinated LL-37 Peptide (Item No. 30987) (100 ng) Lane 5: Citrullinated LL-37 Peptide (Item No. 30987) (200 ng)



1 2 3 4 5 6

Lane 1: Citrullinated LL-37 Peptide (Item No. 30987) (200 ng) Lane 2: Citrullinated Hsp90 (200 ng)

Lane 3: Citrullinated Fibrinogen (Item No. 400076) (200 ng) Lane 4: Citrullinated α-Enolase (Item No. 21585) (200 ng)

Lane 5: Citrullinated GFAP (Item No. 28622) (200 ng)

Lane 6: Citrullinated β-Catenin (Item No. 29921) (200 ng)

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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#### CAYMAN CHEMICAL

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#### Description

LL-37 is a cationic α-helical peptide expressed in human bone marrow, testis, granulocytes, and gingival epithelium and a variety of immune cells.<sup>1</sup> It has antimicrobial and antiviral activity, and protein levels of LL-37 are increased in epithelial cells, macrophages, and neutrophils following bacterial infection *in vitro*.<sup>1-4</sup> LL-37 can be citrullinated by protein arginine deiminase 2 (PAD2) and PAD4, a modification that reduces its antibacterial and antiviral activities.<sup>4</sup> Citrullinated, unlike native, LL-37 does not prevent mortality in a mouse model of D-galactosamine-sensitized endotoxic shock.<sup>5</sup> Citrullinated LL-37 has been found in neutrophil extracellular traps (NETs), as well as the serum of patients with rheumatoid arthritis (RA) and individuals without RA.<sup>6</sup> Cayman's Citrullinated LL-37 Monoclonal Antibody (Clone 6A8) can be used for ELISA and Western blot (WB) applications. The antibody recognizes citrullinated LL-37 at approximately 9 kDa from human samples.

#### References

- 1. Weinberg, A., Krisanaprakornkit, S., and Dale, B.A. Epithelial antimicrobial peptides: Review and significance for oral applications. *Crit. Rev. Oral Biol. Med.* **9(4)**, 399-414 (1998).
- Rivas-Santiago, B., Hernandez-Pando, R., Carranza, C., et al. Expression of cathelicidin LL-37 during Mycobacterium tuberculosis infection in human alveolar macrophages, monocytes, neutrophils, and epithelial cells. Infect. Immun. 76(3), 935-941 (2008).
- 3. Gudmundsson, G.H., Agerberth, B., Odeberg, J., *et al.* The human gene *FALL39* and processing of the cathelin precursor to the antibacterial peptide LL-37 in granulocytes. *Eur. J. Biochem.* **238(2)**, 325-332 (1996).
- 4. Ishiyama, M., Shiga, M., Sasamoto, K., *et al.* A new sulfonated tetrazolium salt that produces a highly water-soluble formazan dye. *Chem. Pharm. Bull.* **41(6)**, 1118-1122 (1993).
- 5. Koziel, J., Bryzek, D., Sroka, A., *et al.* Citrullination alters immunomodulatory function of LL-37 essential for prevention of endotoxin-induced spesis. *J. Immunol.* **192(11)**, 5363-5372 (2014).
- Wong, A., Bryzek, D., Dobosz, E., *et al.* A novel biological role for peptidyl-arginine deiminases: Citrullination of cathelicidin LL-37 controls the immunostimulatory potential of cell-free DNA. *J. Immunol.* 200(7), 2327-2340 (2018).

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