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## Product Data Sheet

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Product Name: Defensin HNP-2 human

Cat. No.: GC66368

### Chemical Properties

Cas. No. 99287-07-7

Formula  $C_{147}H_{217}N_{43}O_{37}S_6$ 

M.Wt 3370.95

Solubility

Storage

Store at -20°C

General tips

For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure 

### Background

Defensin HNP-2 is a peptide with antimicrobial properties that is secreted by human polymorphonuclear leukocytes (PMNs).<sup>1</sup> It induces 26.2 and 43.5% lysis of mammalian cells at concentrations of 25 and 100 µg/ml, respectively.<sup>2</sup> It also completely inhibits secretion of the exotoxin superantigen TSS toxin-1 (TSST-1) from *S. aureus* at a concentration of 5 ng/ml and inhibits infection of McCoy cells by *C. trachomatis* elementary bodies (EBs).<sup>3,4</sup> Defensin HNP-2 binds to recombinant HIV-1 envelope glycoprotein gp120 and human CD4 ( $K_d$ s = 8 and 15.8 nM, respectively).<sup>5</sup> It also induces permeabilization of large unilamellar vesicles (LUVs) formed from 1-palmitoyl-2-oleoyl-*sn*-glycero-3-PG.<sup>6</sup>

1. Lehrer, R.I. Primate defensins *Nat. Rev. Microbiol.* 2(9)727-738(2004) 2. Lichtenstein, A., Ganz, T., Selsted, M.E., et al. In vitro tumor cell cytolysis mediated by peptide defensins of human and rabbit granulocytes *Blood* 68(6)1407-1410(1986) 3. Merriman, J.A., Nemeth, K.A., and Schlievert, P.M. Novel antimicrobial peptides that inhibit gram positive bacterial exotoxin synthesis *PLoS One* 9(4)(2014) 4. Yasin, B., Harwig, S.S.L., Lehrer, R.I., et al. Susceptibility of *Chlamydia trachomatis* to protegrins and defensins *Infect. Immun.* 64(3)709-713(1996) 5. Wang, W., Owen, S.M., Rudolph, D.L., et al. Activity of α-

**Caution: Product has not been fully validated for medical applications. For research use only.**

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and  $\theta$ -defensins against primary isolates of HIV-1J. Immunol.173(1)515-520(2004)  
6.Wimley, W.C., Selsted, M.E., and White, S.H.Interactions between human defensins and lipid bilayers: Evidence for formation of multimeric poresProtein Sci.3(9)1362-1373(1994)

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