

$\beta$ -Defensin-2 (human) (trifluoroacetate salt)

## Chemical Properties

CAS No. :

Formula:

Molecular Weight:

Storage: Keep away from moisture  
 Powder: -20°C for 3 years | In solvent: -80°C for 1 year  
 Actual storage temperature shall be subject to the COA.

## Biological Description

Description	$\beta$ -Defensin-2 is a peptide with antimicrobial properties that protects the skin and mucosal membranes of the respiratory, genitourinary, and gastrointestinal tracts. It inhibits the growth of periodontopathogenic and cariogenic bacteria, including <i>P. gingivalis</i> and <i>S. salivarius</i> .
In vitro	$\beta$ -Defensin-2 (30 $\mu$ g/ml) stimulates gene expression and production of IL-6, IL-10, CXCL10, CCL2, MIP-3 $\alpha$ , and RANTES by keratinocytes. <sup>3</sup> It also stimulates calcium mobilization, migration, and proliferation of keratinocytes when used at concentrations of 30, 10, and 40 $\mu$ g/ml, respectively. <sup>1,2</sup>
In vivo	$\beta$ -Defensin-2 induces IL-31 production by human peripheral blood-derived mast cells in vitro when used at a concentration of 10 $\mu$ g/ml and by rat mast cells in vivo following a 500 ng intradermal dose. <sup>4</sup> Expression of $\beta$ -defensin-2 is increased in psoriatic skin and chronic wounds. <sup>5,6</sup>

## Solubility Information

Solubility	H <sub>2</sub> O: 1 mg/mL, Sonication is recommended. (< 1 mg/ml refers to the product slightly soluble or insoluble)
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## Reference

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- Butmarc, J., Yufit, T., Carson, P., et al. Human  $\beta$ -defensin-2 expression is increased in chronic wounds *Wound Repair Regen.* 12(4)439-443(2004)

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