



上海源叶生物科技有限公司  
 Shanghai yuanye Bio-Technology Co., Ltd  
 电话: 021-61312973 传真: 021-55068248  
 网址: www.shyuanye.com  
 邮箱: shyysw@sina.com

产品名称: **Melittin**  
 产品别名: 蜂毒肽

生物活性:					
<b>Description</b>	Melittin is a PLA <sub>2</sub> activator, stimulates the activity of the low molecular weight PLA <sub>2</sub> , while it does not the increase activity of the high molecular weight PLA <sub>2</sub> .				
<b>IC<sub>50</sub> &amp; Target</b>	PLA <sub>2</sub> [1]				
<b>In Vitro</b>	Melittin, an immunologically related PLA <sub>2</sub> stimulating peptide from bee venom, increases the activity of the high molecular weight enzyme[1]. Melittin is a cytotoxic peptide from bee venom. Melittin exhibits toxicity against both A2780CR and A2780 cells, with IC <sub>50</sub> values of 4.5 and 6.8 µg/mL, respectively. Melittin has natural anti-bacterial, anti-viral, and anti-inflammatory properties. It has also been shown to have diverse anticancer effects in several different cancer cell lines including those of gastric, breast, ovarian, liver, prostate, cervical, and lung origins. The mechanisms by which Melittin, an amphipathic haemolytic peptide, exerts its potential anticancer effects include inhibition of cell proliferation, induction of apoptosis, and direct necrosis. Melittin can also prevent EGF-induced cell invasion through its inhibition of the PI3K/Akt/mTOR signaling pathway, but this is primarily related to breast cancer cells[2].				
<b>Solvent&amp;Solubility</b>	<b>In Vitro:</b> H <sub>2</sub> O : ≥ 25 mg/mL (8.78 mM)				
		Solvent Mass Concentration	<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>
	<b>Preparing</b>	1 mM	0.3513 mL	1.7566 mL	3.5131 mL
	<b>Stock Solutions</b>	5 mM	0.0703 mL	0.3513 mL	0.7026 mL
	10 mM	---	---	---	
*请根据产品在不同溶剂中的溶解度选择合适的溶剂配制储备液; 一旦配成溶液, 请分装保存, 避免反复冻融造成的产品失效。 储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month. -80°C 储存时, 请在 6 个月内使用, -20°C 储存时, 请在 1 个月内使用。					
<b>References</b>	[1]. Steiner MR, et al. Responses of purified phospholipases A2 to phospholipase A2 activating protein (PLAP) and Melittin. Biochim Biophys Acta. 1993 Feb 10;1166(1):124-30. [2]. Alonezi S, et al. Metabolomic Profiling of the Effects of Melittin on Cisplatin Resistant and Cisplatin Sensitive Ovarian Cancer Cells Using Mass Spectrometry and Biolog Microarray Technology. Metabolites. 2016 Oct 13;6(4). pii: E35.				
实验参考:					
<b>Cell Assay</b>	Melittin is purified from bee venom by reversed phase liquid chromatography and reconstituted in sterile water to form a stock solution of 1 mg/mL before storage at -20 °C until required for analysis. Cell viability is assessed by an Alamar Blue (AB) cell viability reagent. Both A2780 and A2780CR cells are seeded at 1×10 <sup>4</sup> cells/well in 96-well plates and incubated at 37 °C and 5% CO <sub>2</sub> in a humidified atmosphere for 24 h. After this incubation period, the cells are treated with various concentrations of Melittin ranging from 0.5 to 14 µg/mL in 100 µL of medium, and re-incubated at 37 °C and 5% CO <sub>2</sub> for a further 24 h. Triton X at 1% (v/v) and cell culture media are used as positive and negative controls, respectively. After this, AB is added				



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	<p>at a final concentration of 10% (v/v) and the resultant mixture is incubated for a further 4 h at 37 °C and 5% CO<sub>2</sub>. Then, the plates are read at an excitation wavelength of 560 nm and the emission at 590 nm is recorded on a SpectraMax M3 microplate reader . Background-corrected fluorescence readings are converted to cell viability data for each test well by expressing them as percentages relative to the mean negative control value[2].</p>
<b>References</b>	<p>[1]. Steiner MR, et al. Responses of purified phospholipases A2 to phospholipase A2 activating protein (PLAP) and Melittin. <i>Biochim Biophys Acta</i>. 1993 Feb 10;1166(1):124-30.</p> <p>[2]. Alonezi S, et al. Metabolomic Profiling of the Effects of Melittin on Cisplatin Resistant and Cisplatin Sensitive Ovarian Cancer Cells Using Mass Spectrometry and Biolog Microarray Technology. <i>Metabolites</i>. 2016 Oct 13;6(4). pii: E35.</p>



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