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产品名称: 25 羟基维生素 D<sub>2</sub>

产品别名: Ercalcidiol; 25-羟麦角甾醇; 25-hydroxy Vitamin D<sub>2</sub>

|                           |   |                                |           |            |
|---------------------------|---|--------------------------------|-----------|------------|
| 生物活性:                     |   |                                |           |            |
| Description               | Ercalcidiol is a metabolite of vitamin D <sub>2</sub> , is regarded as an indicator of vitamin D nutritional status.  |                                |           |            |
| IC <sub>50</sub> & Target | Human Endogenous Metabolite   |                                |           |            |
| In Vitro                  | Differentiation between Ercalcidiol (25(OH)D <sub>2</sub> ) and 25(OH)D <sub>3</sub> is important for monitoring vitamin D therapy, as vitamin D <sub>2</sub> is the predominant prescription form. The half-life of Ercalcidiol is shorter than that of 25(OH)D <sub>3</sub> and it binds less well to the vitamin D binding protein, making it less potent and, therefore, required to be administered at much higher doses than vitamin D <sub>3</sub> . Some currently used assays have a diminished capacity to detect Ercalcidiol, which can lead to dangerous overdosing when attempting to monitor therapy with vitamin D <sub>2</sub> [2].   |                                |           |            |
| Solvent&Solubility        | <b>In Vitro:</b><br><b>DMSO : ≥ 100 mg/mL (242.34 mM)</b><br><br>* "≥" means soluble, but saturation unknown.   |                                |           |            |
|                           | Preparing<br><br>Stock Solutions  | Solvent / Mass / Concentration | 1 mg      | 5 mg       |
|                           |   | 1 mM                           | 2.4234 mL | 12.1168 mL |
|                           |   | 5 mM                           | 0.4847 mL | 2.4234 mL  |
|                           |   | 10 mM                          | 0.2423 mL | 1.2117 mL  |
|                           | *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。<br><br>储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month (protect from light, stored under nitrogen)。-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。<br><br><b>In Vivo:</b><br><br>请根据您的实验动物和给药方式选择适当的溶解方案。以下溶解方案都请先按照 In Vitro 方式配制澄清的储备液, 再依次添加助溶剂:<br><br>——为保证实验结果的可靠性, 澄清的储备液可以根据储存条件, 适当保存; 体内实验的工作液, 建议您现用现配, 当天使用; 以下溶剂前显示的百分比是指该溶剂在您配制终溶液中的体积占比; 如在配制过程中出现沉淀、析出现象, 可以通过加热和/或超声的方式助溶<br><br>1.请依序添加每种溶剂: 10% DMSO→40% PEG300 →5% Tween-80 → 45% saline<br><br>Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution<br><br>此方案可获得 ≥ 2.5 mg/mL (6.06 mM, 饱和度未知) 的澄清溶液。<br><br>以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 400 μL PEG300 中, 混合均匀; 向上述体系中加入 50 μL Tween-80, 混合均匀; 然后继续加入 450 μL 生理盐水定容至 1 mL。<br><br>2.请依序添加每种溶剂: 10% DMSO→ 90% (20% SBE-β-CD in saline)<br><br>Solubility: ≥ 2.5 mg/mL (6.06 mM); Clear solution<br><br>此方案可获得 ≥ 2.5 mg/mL (6.06 mM, 饱和度未知) 的澄清溶液。<br><br>以 1 mL 工作液为例, 取 100 μL 25.0 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水溶液中, 混合均匀。 |                                |           |            |
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|------------|--|
|            | <p>3.请依序添加每种溶剂: 10% DMSO →90% corn oil</p> <p>Solubility: <math>\geq 2.5</math> mg/mL (6.06 mM); Clear solution</p> <p>此方案可获得 <math>\geq 2.5</math> mg/mL (6.06 mM, 饱和度未知) 的澄清溶液, 此方案不适用于实验周期在半个月以上的实验。</p> <p>以 1 mL 工作液为例, 取 100 <math>\mu</math>L 25.0 mg/mL 的澄清 DMSO 储备液加到 900 <math>\mu</math>L 玉米油中, 混合均匀。</p>   |
| References | <p>[1]. Li L, et al. Performance evaluation of two immunoassays for 25-hydroxyvitamin D. J Clin Biochem Nutr. 2016 May;58(3):186-92.</p> <p>[2]. Newman MS, et al. A liquid chromatography/tandem mass spectrometry method for determination of 25-hydroxy vitamin D2 and 25-hydroxy vitamin D3 in dried blood spots: a potential adjunct to diabetes and cardiometabolic risk screening. J Diabetes Sci Technol</p> |

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