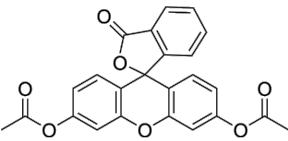


# Fluorescein Diacetate

货号: **B26694**



## 产品信息

生物活性	Fluorescein diacetate is a cell permeable esterase-substrate. Fluorescein diacetate can be used as a fluorogenic substrate for hGSTP1-1.
CAS	596-09-8
中文名称	荧光素二乙酸酯
分子量	416.38
体外研究	<p>Fluorescein diacetate (FDA) is an acetylated derivative of the green fluorescent dye fluorescein. Fluorescein diacetate (FDA), a fluorescent probe used for vital staining, is a fluorescently activated by esterolytic activity of human Pi-class glutathione S-transferase (hGSTP1) selectively among various cytosolic GSTs. Fluorescence activation of Fluorescein diacetate susceptible to GST inhibitors is observed in MCF7 cells exogenously overexpressing hGSTP1, but not in cells overexpressing hGSTA1 or hGSTM1. Fluorescein diacetate can be used as a fluorogenic substrate for hGSTP1-1. To investigate whether the fluorescence activation is due to hGSTP1 activity, Fluorescein diacetate is incubated with recombinant hGSTP1-1 and GSH in vitro. Remarkable fluorescence activation is observed in the presence of both hGSTP1-1 and GSH, whereas only slight activation is observed in the absence of either of them or when the enzyme is heat inactivated. This suggests that the fluorescence activation of Fluorescein diacetate depends on hGSTP1-1 activity. From the linear relationship between the rate of increase in fluorescence and the hGSTP1-1 concentration, the specific activity of the enzyme for 1 <math>\mu</math>M Fluorescein diacetate is determined to be <math>79\pm15</math> nmol/min/mg protein. Fluorescein diacetate is applicable as a fluorogenic substrate for evaluating inhibitors of GSTP1-1 in vitro. For Fluorescein diacetate as a substrate, both Ethacrynic acid (EA) and NBDHEX suppress the hGSTP1-1-dependent fluorescent increase in a concentration-dependent manner, with IC<sub>50</sub>s of <math>3.3\pm0.5</math> <math>\mu</math>M and <math>0.61\pm0.04</math> <math>\mu</math>M, respectively.</p> <p><b>The accuracy of these methods have not been independently confirmed. They are for reference only.</b></p>
体内研究	
形式	Solid
运输条件	Room temperature in continental US; may vary elsewhere.
保存条件	-20°C, protect from light

溶解性	<p>In Vitro:</p> <p><b>DMSO : 26.67 mg/mL (64.05 mM; Need ultrasonic)</b></p> <p>配制储备液</p> <table><tr><th>浓度</th><th>溶剂</th><th>体积</th><th>质量</th></tr><tr><td></td><td></td><td><b>1 mg</b></td><td><b>5 mg</b></td><td><b>10 mg</b></td></tr><tr><td>1 mM</td><td>2.4017 mL</td><td>12.0083 mL</td><td>24.0165 mL</td><td></td></tr><tr><td>5 mM</td><td>0.4803 mL</td><td>2.4017 mL</td><td>4.8033 mL</td><td></td></tr><tr><td>10 mM</td><td>0.2402 mL</td><td>1.2008 mL</td><td>2.4017 mL</td><td></td></tr></table> <p>*</p> <p>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。</p> <p>储备液的保存方式和期限：-80℃, 6 months; -20℃, 1 month (protect from light)。-80℃ 储存时，请在 6 个月内使用，-20℃ 储存时，请在 1 个月内使用。</p> <p>In Vivo:</p> <p>请根据您的<a href="#">实验动物和给药方式</a>选择适当的溶解方案。以下溶解方案都请先按照 <b>In Vitro</b> 方式配制澄清的储备液，再依次添加助溶剂：</p> <p>——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</p> <ul style="list-style-type: none"><li>1.<p>请依序添加每种溶剂： 10% DMSO 90% (20% <a href="#">SBE-β-CD</a> in saline)</p><p>Solubility: ≥ 2.08 mg/mL (5.00 mM); Clear solution</p><p>此方案可获得 ≥ 2.08 mg/mL (5.00 mM，饱和度未知) 的澄清溶液。</p><p>以 1 mL 工作液为例，取 100 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 20% 的 SBE-β-CD 生理盐水水溶液中，混合均匀。</p><p>将 2 g 磺丁基醚 β-环糊精加入 5 mL 生理盐水中，再用生理盐水定容至 10 mL，完全溶解，澄清透明</p></li><li>2.<p>请依序添加每种溶剂： 10% DMSO 90% <a href="#">corn oil</a></p><p>Solubility: ≥ 2.08 mg/mL (5.00 mM); Clear solution</p><p>此方案可获得 ≥ 2.08 mg/mL (5.00 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 μL 20.8 mg/mL 的澄清 DMSO 储备液加到 900 μL 玉米油中，混合均匀。</p></li></ul> <p>*以上所有助溶剂都可在 <a href="#">MCE 网站</a> 选购。</p>	浓度	溶剂	体积	质量			<b>1 mg</b>	<b>5 mg</b>	<b>10 mg</b>	1 mM	2.4017 mL	12.0083 mL	24.0165 mL		5 mM	0.4803 mL	2.4017 mL	4.8033 mL		10 mM	0.2402 mL	1.2008 mL	2.4017 mL	
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纯度	99.87%																								