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产品名称: 钙黄绿素蓝
产品别名: **Calcein Blue**

生物活性:						
Description		Calcein Blue is a short-term, blue-fluorescent dye.				
In Vitro		Calcein blue AM is only weakly fluorescent (excitation/emission maxima 322/435 nm). Upon cleavage of the AM esters by intracellular esterases, this tracer becomes relatively polar and is retained by cells for several hours. In addition, its fluorescence intensity increases and its fluorescence spectra shift to longer wavelengths, with excitation/emission maxima of 360/449 nm. The fluorescence of Calcein Blue is known to be quenched in the presence of iron(III); if a stronger chelator removes this ion from the fluorophore, the fluorescence of the fluorophore is regained[1]. A novel fluorimetric assay for dopamine using calcein blue (CB) complexed with Fe ₂ ion as a chemical sensor is described. The fluorescence arising from calcein blue of the calcein blue-Fe ₂ complex is quenched by the Fe ₂ ion. When dopamine is added to a solution of the calcein blue-Fe ₂ complex, a dopamine-Fe ₂ complex is formed as the result of a ligand exchange reaction between calcein blue and dopamine which permits the fluorescence from calcein blue to be recovered. The fluorescence intensity at the wavelength of 440 nm (at the excitation wavelength of 340 nm) is found to be proportional to the concentration of the dopamine added to the calcein blue-Fe ₂ complex solution, which permits dopamine to be quantitatively determined[2].				
Solvent&Solubility		In Vitro:				
		DMSO : 6 mg/mL (18.68 mM; Need ultrasonic and warming)				
		Solvent / Mass		1 mg	5 mg	10 mg
		Concentration				
		Preparing Stock Solutions	1 mM	3.1125 mL	15.5627 mL	31.1255 mL
5 mM	0.6225 mL	3.1125 mL	6.2251 mL			
10 mM	0.3113 mL	1.5563 mL	3.1125 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。 储备液的保存方式和期限: -80°C, 6 months; -20°C, 1 month (protect from light)。 -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。						
References		[1]. Sankaranarayanan R, et al. A new fluorimetric method for the detection and quantification of siderophores using Calcein Blue, with potential as a bacterial detection tool. Appl Microbiol Biotechnol. 2015 Mar;99(5):2339-49. [2]. Seto D, et al. A simple and selective fluorometric assay for dopamine using a calcein blue-Fe ₂ + complex fluorophore. Talanta. 2012 May 30;94:36-43.				
实验参考:						
Cell Assay		The recommended final working concentrations is usually between 1 and 10 μM to minimize potential artifacts. Generally, 15 minutes to 1 hour is sufficient for cellular uptake and processing of the dyes. A stock concentration of 5 mM 4-methylumbelliferone-8- methyliminodiacetic acid, commonly known as calcein blue is prepared in 0.1 M potassium hydroxide, and the pH is neutralized using 0.1 N hydrochloric acid. The calcein blue stock prepared is diluted to 200 μM (working stock) in DPBS and stored for further use. A				



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	concentration of 10 μ M calcein blue is prepared from the working stock by diluting in DPBS. From this, 200 μ L is added to a 96-well plate and the excitation/emission (Ex./Em.) maximum is determined using the micro-plate reader[1].
References	<p>[1]. Sankaranarayanan R, et al. A new fluorimetric method for the detection and quantification of siderophores using Calcein Blue, with potential as a bacterial detection tool. Appl Microbiol Biotechnol. 2015 Mar;99(5):2339-49.</p> <p>[2]. Seto D, et al. A simple and selective fluorometric assay for dopamine using a calcein blue-Fe²⁺ complex fluorophore. Talanta. 2012 May 30;94:36-43.</p>



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