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产品名称: 兰色染料

产品别名: **Procion Blue HB; Reactive Blue 2**

生物活性:

Description	Procion Blue HB (Reactive Blue 2) is a purinergic antagonist.				
In Vitro	Reactive Blue 2 is used as an ATP receptor antagonist and induces Ca²⁺ oscillations in HeLa cells. Reactive Blue 2 enhances a Ca²⁺ response to histamine that is linked to the PLC cascade. Reactive Blue 2 may activate the PLC cascade in an extracellular Ca²⁺-dependent manner and induce Ca²⁺ oscillations^[1]. The application of Reactive Blue 2 increases K⁺ secretion in a dose-dependent manner, and this increase is characterized as a peak followed by a partial relaxation to a steady-state. Reactive Blue 2 has antagonistic activities at P2Y4, and the antagonist potency at P2Y4 paralleled the potency of K⁺ secretion^[2].The anthraquinone dye reactive blue 2 is found to be a potent inhibitor of a protein kinase isolated and purified from thylakoids. The mode of inhibition is noncompetitive, with a K_i of 8 μM for the membrane-bound kinase, and 6 microM for the purified kinase. The inhibitor does not modify the substrate preference of the endogenous kinase and could be removed from the membrane by washing^[3]. Reactive blue 2 selectively inhibits responses mediated via the P2ypurinoceptor, at least within a limited concentration range. In preparations where the tone has been raised with noradrenaline, ATP and 2-methylthio ATP, but not α,β-methylene ATP, produce relaxations of the vessel. These relaxations are inhibited in the presence of reactive blue 2^[4]. Reactive blue 2, at concentrations of 0.3-10 μM blocks the ATP-induced oscillation in a concentration-dependent manner^[5].				
Solvent&Solubility	In Vitro: DMSO : ≥ 110 mg/mL (142.09 mM) H₂O : 10 mg/mL (12.92 mM; Need ultrasonic) Ethanol : < 1 mg/mL (insoluble) * "≥" means soluble, but saturation unknown.				
		Solvent Mass Concentration	1 mg	5 mg	10 mg
	Preparing	1 mM	1.2917 mL	6.4586 mL	12.9172 mL
	Stock Solutions	5 mM	0.2583 mL	1.2917 mL	2.5834 mL
		10 mM	0.1292 mL	0.6459 mL	1.2917 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℃, 6 months; -20℃, 1 month。 -80℃ 储存时，请在 6 个月内使用， -20℃ 储存时，请在 1 个月内使用。					
References	[1]. Okuda A, et al. Reactive blue 2 induces calcium oscillations in HeLa cells. Jpn J Physiol. 2001 Jun;51(3):389-93. [2]. Lee JH, et al. Reactive blue 2, an antagonist of rat P2Y4, increases K⁺ secretion in rat cochlea stria marginal cells. Hear Res. 2006 Sep;219(1-2):66-73. [3]. Coughlan SJ, et al. Reactive blue 2 is a potent inhibitor of a thylakoid protein kinase. Eur J Biochem. 1991 Apr 23;197(2):467-71.				



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- [4]. Burnstock G, et al. P2-purinoceptors of two subtypes in the rabbit mesenteric artery: reactive blue 2 selectively inhibits responses mediated via the P2y-but not the P2x-purinoceptor. Br J Pharmacol. 1987 Feb;90(2):383-91.
- [5]. Uneyama H, et al. Suramin and reactive blue 2 are antagonists for a newly identified purinoceptor on rat megakaryocyte. Br J Pharmacol. 1994 Jan;111(1):245-9.



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