

Product Data Sheet

Product Name: Dopamine

Cat. No.: GC62940

Chemical Properties

Cas. No. 51-61-6

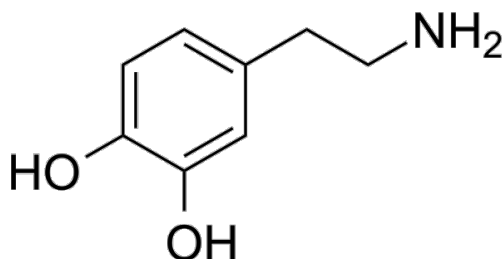
Formula $C_8H_{11}NO_2$ M.Wt 153.18

Solubility DMSO : 100 mg/mL (652.83 mM; Need ultrasonic) Storage Store at RT, protect from light, stored under nitrogen

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

Dopamine is a catecholamine neurotransmitter that is produced in the substantia nigra, ventral tegmental area, and hypothalamus of the brain. Dopamine plays several important roles in the brain

Caution: Product has not been fully validated for medical applications. For research use only.

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and body[1]. Dopamine acts through D2 dopamine receptors to induce endocytosis of VEGFR2, which is critical for promoting angiogenesis[1].

Vascular permeability factor/vascular endothelial growth factor (VPF/VEGF) strongly stimulates human umbilical vein endothelial cells (HUVECs) proliferation. The stimulatory effect of VPF/VEGF is abrogated by Dopamine (1 μ 24hours)[2].

Dopamine (50 mg/kg; i.p. injection; days 1-7) strongly and selectively inhibits the vascular permeabilizing and angiogenic activities of VPF/VEGF[2].

[1]. Juárez Olguín H, et al. The Role of Dopamine and Its Dysfunction as a Consequence of Oxidative Stress. *Oxid Med Cell Longev*. 2016;2016:9730467.

[2]. Basu S, et al. The neurotransmitter dopamine inhibits angiogenesis induced by vascular permeability factor/vascular endothelial growth factor. *Nat Med*. 2001 May;7(5):569-74.

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