PRODUCT INFORMATION



Zardaverine

Item No. 29685

CAS Registry No.:	101975-10-4	
Formal Name:	6-[4-(difluoromethoxy)-3-	FF
	methoxyphenyl]-3(2H)-pyridazinone	
MF:	$C_{12}H_{10}F_{2}N_{2}O_{3}$	ý v
FW:	268.2	
Purity:	≥98%	
UV/Vis.:	λ _{max} : 255 nm	
Supplied as:	A crystalline solid	
Storage:	-20°C	0
Stability:	≥4 years	· · ·
Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.		

Laboratory Procedures

Zardaverine is supplied as a crystalline solid. A stock solution may be made by dissolving the zardaverine in the solvent of choice, which should be purged with an inert gas. Zardaverine is soluble in the organic solvent DMSO at a concentration of approximately 100 mM.

Description

Zardaverine is a dual inhibitor of phosphodiesterase 3 (PDE3) and PDE4 (IC₅₀s = 0.617 and 1.738 μ M, respectively, for the rat cardiac ventricle enzymes).¹ It is selective for PDE3 and PDE4 over PDE1B, PDE2, and PDE5 (IC₅₀s = >138 μ M for all). Zardaverine inhibits aggregation of human platelets induced by ADP (Item No. 21121), platelet-activating factor (PAF), collagen, arachidonic acid (Item Nos. 90010 | 90010.1 | 10006607), or prostaglandin E_1 (PGE₁; Item No. 13010) and ADP (IC₅₀s = 1.5-16.2 μ M). It inhibits zymosan-induced superoxide anion release from human polymorphonuclear (PMN) cells (IC₅₀ = 0.4 μ M). Zardaverine (10 µmol/kg) decreases lung resistance and increases dynamic compliance in a rat model of acetylcholine-induced bronchospasm.² It decreases the viability of HeLa, COLO 741, NCI H2122, and A2058 cells that endogenously express high levels of PDE3A (IC₅₀s = 0.032, 0.027, 0.26, and 0.13 μ M, respectively), but is inactive against a panel of eight cancer cell lines that express low levels of PDE3A (IC₅₀s = >16 μ M for all).³

References

- 1. Schudt, C., Winder, S., Müller, B., et al. Zardaverine as a selective inhibitor of phosphodiesterase isozymes. Biochem. Pharmacol. 42(1), 153-162 (1991).
- Hoymann, H.G., Heinrich, U., Beume, R., et al. Comparative investigation of the effects of zardaverine and 2. theophylline on pulmonary function in rats. Exp. Lung Res. 20(3), 235-250 (1994).
- 3. Nazir, M., Senkowski, W., Nyberg, F., et al. Targeting tumor cells based on phosphodiesterase 3A expression. Exp. Cell Res. 361(2), 308-315 (2017).

WARNING THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

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1180 EAST ELLSWORTH RD ANN ARBOR, MI 48108 · USA PHONE: [800] 364-9897 [734] 971-3335 FAX: [734] 971-3640 CUSTSERV@CAYMANCHEM.COM WWW.CAYMANCHEM.COM