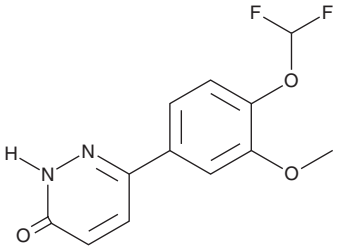
PRODUCT INFORMATION

Zardaverine

Item No. 29685

CAS Registry No.:	101975-10-4
Formal Name:	6-[4-(difluoromethoxy)-3-methoxyphenyl]-3(2H)-pyridazinone
MF:	$C_{12}H_{10}F_2N_2O_3$
FW:	268.2
Purity:	≥98%
UV/Vis.:	λ_{max}: 255 nm
Supplied as:	A crystalline solid
Storage:	-20°C
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 (IC_{50}s = 0.617 and 1.738 µM, respectively, for the rat cardiac ventricle enzymes).[1] It is selective for PDE3 and PDE4 over PDE1B, PDE2, and PDE5 (IC_{50}s = >138 µM 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 (PGE_1; Item No. 13010) and ADP (IC_{50}s = 1.5-16.2 µM). It inhibits zymosan-induced superoxide anion release from human polymorphonuclear (PMN) cells (IC_{50} = 0.4 µM). 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 (IC_{50}s = 0.032, 0.027, 0.26, and 0.13 µM, respectively), but is inactive against a panel of eight cancer cell lines that express low levels of PDE3A (IC_{50}s = >16 µM 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).
2. Hoymann, H.G., Heinrich, U., Beume, R., *et al.* Comparative investigation of the effects of zardaverine and 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).

CAYMAN CHEMICAL
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