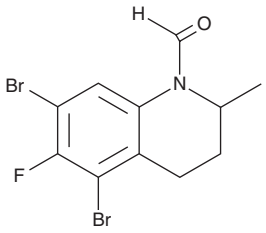
PRODUCT INFORMATION

CE3F4

Item No. 17767

CAS Registry No.:	143703-25-7
Formal Name:	5,7-dibromo-6-fluoro-3,4-dihydro-2-methyl-1(2H)-quinolinecarboxaldehyde
MF:	$C_{11}H_{10}Br_2FNO$
FW:	351.0
Purity:	≥98%
UV/Vis.:	λ_{max}: 220, 294 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

CE3F4 is supplied as a crystalline solid. A stock solution may be made by dissolving the CE3F4 in the solvent of choice. CE3F4 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of CE3F4 in ethanol is approximately 5 mg/ml and approximately 30 mg/ml in DMSO and DMF.

CE3F4 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, CE3F4 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. CE3F4 has a solubility of approximately 0.09 mg/ml in a 1:10 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

Exchange protein activated by cAMP (Epac) proteins mediate cAMP signaling independent of protein kinase A (PKA). CE3F4 is an uncompetitive inhibitor of Epac1 activity toward its effector Rap1 *in vitro* (IC_{50} = 23 µM) and in cells.[1,2] It has no effect on PKA activity. CE3F4 blocks Epac1-induced autophagy in cardiomyocytes stimulated with isoprenaline and blocks the activation of transient receptor potential canonical channels by the Epac activator 8-pCPT.[3,4]

References

1. Courilleau, D., Bisserier, M., Jullian, J.-C., *et al.* Identification of a tetrahydroquinoline analog as a pharmacological inhibitor of the cAMP-binding protein Epac. *J. Biol. Chem.* **287(53)**, 44192-44202 (2012).
2. Brown, L.M., Rogers, K.E., McCammon, J.A., *et al.* Identification and validation of modulators of exchange protein activated by cAMP (Epac) activity: Structure-function implications for Epac activation and inhibition. *J. Biol. Chem.* **289(12)**, 8217-8230 (2014).
3. Laurent, A.C., Bisserier, M., Lucas, A., *et al.* Exchange protein directly activated by cAMP 1 promotes autophagy during cardiomyocyte hypertrophy. *Cardiovasc. Res.* **105(1)**, 55-64 (2015).
4. Domķnguez-Rodrķguez, A., Ruiz-Hurtado, G., Sabourin, J., *et al.* Proarrhythmic effect of sustained EPAC activation on TRPC3/4 in rat ventricular cardiomyocytes. *J. Mol. Cell Cardiol.* **87**, 74-78 (2015).

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