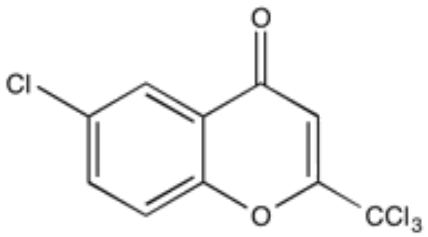
Catalog # 10-1620
ST034307
CAS# 133406-29-8
6-Chloro-2-(Trichloromethyl)-4H-1-benzopyran-4-one
Lot # X106756



A novel selective adenylyl cyclase 1 (AC1) inhibitor, IC_{50}=2.3 μM . Inhibits calcium^{2+}-stimulated cAMP accumulation in HEK cells stably transfected with AC1[1,3]. It was also shown to inhibit AC1 stimulated by forskolin- and $G\alpha_s$-coupled receptors in HEK-AC1 cells. It enhanced μ-opioid receptor-mediated inhibition of AC1 but it blocked heterologous sensitization of AC1 caused by chronic μ-opioid receptor activation.[1] Displays analgesic properties in a mouse model of inflammatory pain.[1] A useful tool for exploring the involvement of AC1 in cellular signalling.[2]

1) Brust *et al*. (2017), *Identification of a selective small-molecule inhibitor of type 1 adenylyl cyclase activity with analgesic properties*; Sci. Signal., **10** eaah5381
2) Jiang et al, (2018), *Cyclic-Nucleotide- and HCN-Channel-Mediated Phototransduction in Intrinsically Photosensitive Retinal Ganglion Cells*; Cell **175** 652
3) Watts (2018), *Selective Adenylyl Cyclase Type 1 Inhibitors as Potential Opioid Alternatives For Chronic Pain*; Neuropsychopharmacology **43** 215

PHYSICAL DATA

Molecular Weight:	297.95
Molecular Formula:	$C_{10}H_4Cl_4O_2$
Purity:	98% by TLC
	NMR: (Conforms)
Solubility:	DMSO (up to 30 mg/ml) or Ethanol (up to 6 mg/ml)
Physical Description:	Yellow solid
Storage and Stability:	Store as supplied at room temperature for up to 1 year from the date of purchase. Solutions in DMSO or ethanol may be stored at -20°C for up to 3 months.

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