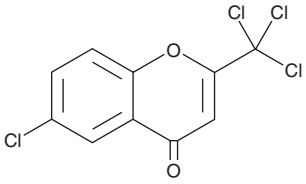
PRODUCT INFORMATION

ST034307

Item No. 21777

CAS Registry No.: 133406-29-8
Formal Name: 6-chloro-2-(trichloromethyl)-4H-1-benzopyran-4-one
MF: $C_{10}H_4Cl_4O_2$
FW: 298.0
Purity: ≥95%
UV/Vis.: λ_{max}: 230, 312 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

ST034307 is supplied as a crystalline solid. A stock solution may be made by dissolving the ST034307 in the solvent of choice, which should be purged with an inert gas. ST034307 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF). The solubility of ST034307 in these solvents is approximately 5 and 10 mg/ml, respectively.

ST034307 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, ST034307 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. ST034307 has a solubility of approximately 0.2 mg/ml in a 1:4 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

Description

ST034307 is an inhibitor of adenylyl cyclase 1 (AC1), a membrane-bound AC, with an IC_{50} value of 2.3 µM for A23187-stimulated cAMP accumulation in HEK293 cells transfected with AC1.[1] It also inhibits AC1 activation induced by forskolin (Item No. 11018) or isoproterenol (Item No. 15592) *in vitro*. It is selective for AC1 over other membrane-bound AC isoforms. ST034307 enhances the inhibition of AC1 by the µ-opioid receptor (MOR) agonist DAMGO (Item No. 21553) in HEK293 cells transfected with AC1 and MOR. In a mouse model of inflammatory pain, ST034307 reduces hypersensitivity to touch in mouse hind paw (ED_{50} = 0.28 µg), which is blocked by forskolin.

Reference

1. Brust, T.F., Alongkronrusmee, D., Soto-Velasquez, M., *et al.* Identification of a selective small-molecule inhibitor of type 1 adenylyl cyclase activity with analgesic properties. *Sci. Signal* **10(467)**, 1678-1692 (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