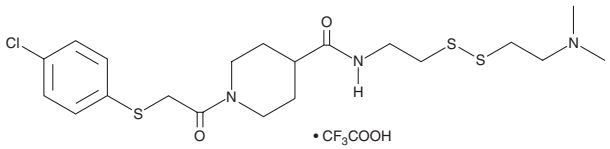
# PRODUCT INFORMATION

## 6H05 (trifluoroacetate salt)

*Item No. 17985*

**CAS Registry No.:** 2061344-88-3
**Formal Name:** 1-[2-[(4-chlorophenyl) thio]acetyl]-N-[2-[[2-(dimethylamino)ethyl]dithio] ethyl]- 4-piperidinecarboxamide, trifluoroacetate salt
**MF:** $C_{20}H_{30}ClN_3O_2S_3 \bullet CF_3COOH$
**FW:** 590.1
**Purity:** ≥98%
**UV/Vis.:** $\lambda_{max}$: 259 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

6H05 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the 6H05 (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. 6H05 (trifluoroacetate salt) is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide (DMF). The solubility of 6H05 (trifluoroacetate salt) in ethanol is approximately 25 mg/ml and approximately 30 mg/ml in DMSO and DMF.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of 6H05 (trifluoroacetate salt) can be prepared by directly dissolving the crystalline solid in aqueous buffers. The solubility of 6H05 (trifluoroacetate salt) in PBS, pH 7.2, is approximately 10 mg/ml. We do not recommend storing the aqueous solution for more than one day.

### Description

The Ras family of small GTPases (H-Ras, K-Ras, and N-Ras) function as molecular switches, cycling between a GTP-bound active state and a GDP-bound inactive state, to turn on downstream Raf protein kinases. This initiates complex signaling pathways involved in cell growth, differentiation, and apoptosis. Mutations leading to aberrant Ras activation are frequently associated with various human cancers. 6H05 is a small molecule that allosterically binds to a mutant cysteine on oncogenic K-Ras(G12C), thus inhibiting its function.[1] Binding of 6H05 to K-Ras(G12C) disrupts both switch-I and switch-II, altering the native nucleotide preference to favor GDP over GTP, which impedes binding to Raf.[1] Because 6H05 is selective for mutant Cys-12, it does not affect wild-type K-Ras.[1]

### Reference

1. Ostrem, J.M., Peters, U., Sos, M.L., *et al.* K-Ras(G12C) inhibitors allosterically control GTP affinity and effector interactions. *Nature* **503(7477)**, 548-551 (2013).



**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