

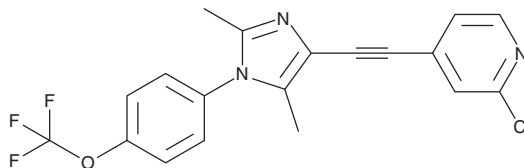
# PRODUCT INFORMATION



## CTEP

Item No. 28773

**CAS Registry No.:** 871362-31-1  
**Formal Name:** 2-chloro-4-[2-[2,5-dimethyl-1-[4-(trifluoromethoxy)phenyl]-1H-imidazol-4-yl]ethynyl]-pyridine  
**MF:** C<sub>19</sub>H<sub>13</sub>ClF<sub>3</sub>N<sub>3</sub>O  
**FW:** 391.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 240, 330 nm  
**Supplied as:** A 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

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

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

### Description

CTEP is an inverse agonist of metabotropic glutamate receptor 5 (mGluR5, K<sub>i</sub>s = 16.4, 12.6, and 9.5 nM for the human, rat, and mouse receptors, respectively, in a radioligand binding assay).<sup>1</sup> It is selective for mGluR5 over mGluR1, -2, -3, -4, -6, -7, and -8 (IC<sub>50</sub>s = >10 μM for all) and the histamine H<sub>1</sub> and α<sub>5</sub>β<sub>3</sub>γ<sub>2</sub> subunit-containing GABA<sub>A</sub> receptors (K<sub>i</sub>s = >4 and >3.2 μM, respectively), but does inhibit adenosine A<sub>1</sub>, A<sub>3</sub>, muscarinic, and kainate receptors (K<sub>i</sub>s = 6.2, 2.3, 5.3, and 7.9 μM, respectively), as well as L-type calcium and sodium channels (K<sub>i</sub>s = 2.7 and 5 μM, respectively) in a panel of 103 receptors, enzymes, and ion channels at 10 μM. CTEP inhibits inositol phosphate accumulation and quisqualate-induced calcium mobilization in HEK293 cells expressing human recombinant mGluR5 (IC<sub>50</sub>s = 6.4 and 11.4 nM, respectively). It reduces stress-induced hyperthermia in mice and increases drinking in the Vogel conflict test in rats, indicating anxiolytic-like activity, when administered at a dose of 0.3 mg/kg.

### Reference

1. Lindemann, L., Jaeschke, G., Michalon, A., *et al.* CTEP: A novel, potent, long-acting, and orally bioavailable metabotropic glutamate receptor 5 inhibitor. *J. Pharmacol. Exp. Ther.* **339**(2), 474-486 (2011).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

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#### 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