

# PRODUCT INFORMATION

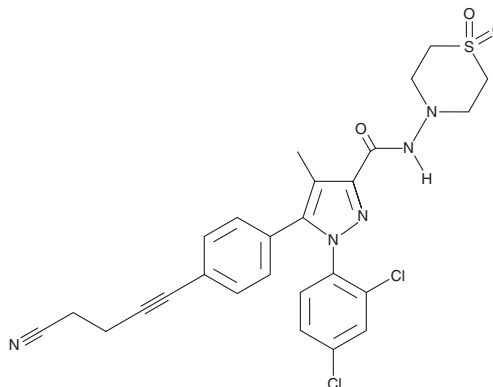


## AM6545

Item No. 16316

**CAS Registry No.:** 1245626-05-4  
**Formal Name:** 5-[4-(4-cyano-1-butyn-1-yl)phenyl]-1-(2,4-dichlorophenyl)-N-(1,1-dioxido-4-thiomorpholinyl)-4-methyl-1H-pyrazole-3-carboxamide

**MF:** C<sub>26</sub>H<sub>23</sub>Cl<sub>2</sub>N<sub>5</sub>O<sub>3</sub>S  
**FW:** 556.5  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 268 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

AM6545 is supplied as a crystalline solid. A stock solution may be made by dissolving the AM6545 in the solvent of choice, which should be purged with an inert gas. AM6545 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of AM6545 in these solvents is approximately 10 mg/ml.

AM6545 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, AM6545 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. AM6545 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

Peripherally-restricted cannabinoid receptor 1 (CB<sub>1</sub>) selective antagonists have the potential to inhibit food intake while also escaping centrally-mediated neuropsychiatric side effects. AM6545 is a novel CB<sub>1</sub> selective neutral antagonist with low CNS penetration, exhibiting K<sub>i</sub> values of 1.7 and 523 nM for CB<sub>1</sub> and CB<sub>2</sub> receptors, respectively.<sup>1</sup> It reduces food intake and food-reinforced behavior, such as time spent feeding, in a dose-dependent manner, resulting in decreased body weight.<sup>1,2</sup> AM6545 produces improvements in glucose homeostasis, fatty liver, and plasma lipid profiles in mice with diet-induced obesity.<sup>3</sup> It does not affect behavior responses that are associated with activation of CB<sub>1</sub> receptors in the brain.<sup>3</sup>

### References

1. Cluny, N.L., Vemuri, V.K., Chambers, A.P., *et al.* A novel peripherally restricted cannabinoid receptor antagonist, AM6545, reduces food intake and body weight, but does not cause malaise, in rodents. *Br. J. Pharmacol.* **161**(3), 629-642 (2010).
2. Randall, P.A., Vemuri, V.K., Segovia, K.N., *et al.* The novel cannabinoid CB1 antagonist AM6545 suppresses food intake and food-reinforced behavior. *Pharmacol. Biochem. Behav.* **97**(1), 179-184 (2010).
3. Tam, J., Vemuri, V.K., Liu, J., *et al.* Peripheral CB1 cannabinoid receptor blockade improves cardiometabolic risk in mouse models of obesity. *J. Clin. Invest.* **120**(8), 2953-2966 (2010).

#### 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.

#### WARRANTY AND LIMITATION OF REMEDY

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