

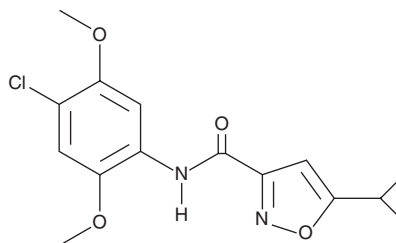
# PRODUCT INFORMATION



## ML115

Item No. 15178

**CAS Registry No.:** 912798-42-6  
**Formal Name:** N-(4-chloro-2,5-dimethoxyphenyl)-5-cyclopropyl-3-isoxazolecarboxamide  
**Synonyms:** CID 6619100, SID 14735210  
**MF:** C<sub>15</sub>H<sub>15</sub>ClN<sub>2</sub>O<sub>4</sub>  
**FW:** 322.7  
**Purity:** ≥98%  
**Stability:** ≥2 years at -20°C  
**Supplied as:** A crystalline solid  
**UV/Vis.:** λ<sub>max</sub>: 236, 317 nm



### Laboratory Procedures

For long term storage, we suggest that ML115 be stored as supplied at -20°C. It should be stable for at least two years.

ML115 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML115 in the solvent of choice. ML115 is soluble in organic solvents such as ethanol, DMSO, and dimethyl formamide, which should be purged with an inert gas. The solubility of ML115 in these solvents is approximately 0.1, 16, and 25 mg/ml, respectively.

ML115 is sparingly soluble in aqueous solutions. To enhance aqueous solubility, dilute the organic solvent solution into aqueous buffers or isotonic saline. If performing biological experiments, ensure the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. We do not recommend storing the aqueous solution for more than one day.

### Description

Signal transducer and activator of transcription 3 (STAT3) is a cytokine-inducible transcription factor with roles in inflammation and cancer.<sup>1,2</sup> ML115 is an isoxazole carboxamide that acts as a cell-permeable STAT3 activator (EC<sub>50</sub> = 2 nM) and is more than 28,000-fold selective for STAT3 over STAT1 and NF-κB.<sup>3</sup> It shows no cytotoxicity against HT-1080 or NIH-3T3 cells. ML115 increases the expression of BCL3, a known STAT3-dependent oncogene, and enhances STAT3 activation by the pro-inflammatory cytokine IL-6.<sup>3</sup> As the maintenance of pluripotency in mouse embryonic stem cells requires continued activation of STAT3, ML115 may be useful in maintaining embryonic stem cells in an undifferentiated state.<sup>3</sup>

### References

1. Poli, V. The role of C/EBP isoforms in the control of inflammatory and native immunity functions. *J. Biol. Chem.* **273**, 29279-29282 (1998).
2. Yu, H. and Jove, R. The stats of cancer - new molecular targets come of age. *Nat. Rev. Cancer* **4**, 97-105 (2004).
3. Madoux, F., Koenig, M., Nelson, E., *et al.* Modulators of STAT transcription factors for the targeted therapy of cancer (STAT3 activators), Bethesda, MD, National Center for Biotechnology Information, in Probe Reports from the NIH Molecular Libraries Program, (2009).

#### 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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