

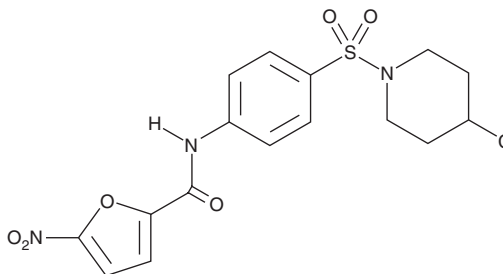
# PRODUCT INFORMATION



## ML-291

Item No. 19831

**CAS Registry No.:** 1523437-16-2  
**Formal Name:** N-[4-[(4-chloro-1-piperidyl)sulfonyl]phenyl]-5-nitro-2-furancarboxamide  
**MF:** C<sub>16</sub>H<sub>16</sub>ClN<sub>3</sub>O<sub>6</sub>S  
**FW:** 413.8  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 257, 320 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

ML-291 is supplied as a crystalline solid. A stock solution may be made by dissolving the ML-291 in the solvent of choice, which should be purged with an inert gas. ML-291 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of ML-291 in these solvents is approximately 1 and 10 mg/ml, respectively.

### Description

ML-291 is a novel activator of the apoptotic arm of the unfolded protein response (UPR), but not the adaptive arm.<sup>1</sup> Specifically, it activates signaling through PERK/eIF2α/CHOP (EC<sub>50</sub> = 762 nM) but not through IRE1/XBP1 (IC<sub>50</sub> > 80 μM).<sup>1</sup> ML-291 induces apoptosis in mouse embryonic fibroblasts overexpressing CHOP (EC<sub>50</sub> ~4.8 μM), but not in wild-type or CHOP knockout cells.<sup>1</sup> It has minimal activity against a panel of 67 receptors, ion channels, and transporters, with the exception of the dopamine transporter (68% inhibition). ML-291 displays greater than average antitumor cell cytotoxicity against colon, melanoma, and renal cancer cell lines in an NCI-60 panel.<sup>1</sup>

### Reference

1. Flaherty, D.P., Golden, J.E., Liu, C., *et al.* Selective small molecule activator of the apoptotic arm of the UPR. Probe Reports from the NIH Molecular Libraries Program (2012).

#### 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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