

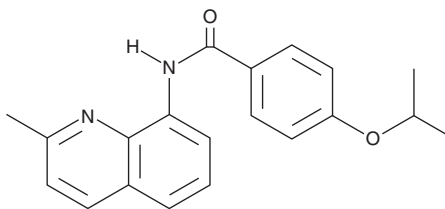
# PRODUCT INFORMATION



## CDN1163

Item No. 31123

**CAS Registry No.:** 892711-75-0  
**Formal Name:** 4-(1-methylethoxy)-N-(2-methyl-8-quinoliny)-benzamide  
**MF:** C<sub>20</sub>H<sub>20</sub>N<sub>2</sub>O<sub>2</sub>  
**FW:** 320.4  
**Purity:** ≥98%  
**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

CDN1163 is supplied as a solid. A stock solution may be made by dissolving the CDN1163 in the solvent of choice, which should be purged with an inert gas. CDN1163 is soluble in the organic solvent DMSO at a concentration of approximately 5 mg/ml.

### Description

CDN1163 is an allosteric activator of sarcoplasmic/endoplasmic reticulum Ca<sup>2+</sup>-ATPase 2 (SERCA2) that enhances calcium uptake in endoplasmic reticulum (ER) vesicles when used at concentrations ranging from 1 to 10 μM.<sup>1</sup> It decreases peroxide-induced cell death in HEK293 cells. CDN1163 (50 mg/kg) increases calcium uptake in ER microsomes isolated from obese mouse liver. It decreases blood glucose levels, plasma and hepatic triglyceride levels, and plasma cholesterol and malondialdehyde (MDA) levels in obese mice. CDN1163 (50 mg/kg) restores SERCA activity, prevents gastrocnemius muscle loss and contractile dysfunction, and reduces mitochondrial production of reactive oxygen species (ROS) in the CuZnSOD-deficient (*Sod*<sup>-/-</sup>) mouse model of oxidative stress-related muscle atrophy and weakness.<sup>2</sup> It also improves motor deficits in the initiation time (IT), stepping, and cylinder tests for akinesia in a rat model of Parkinson's disease induced by 6-OHDA (Item No. 25330).<sup>3</sup>

### References

1. Kang, S., Dahl, R., Hsieh, W., *et al.* Small molecular allosteric activator of the sarco/endoplasmic reticulum Ca<sup>2+</sup>-ATPase (SERCA) attenuates diabetes and metabolic disorders. *J. Biol. Chem.* **291**(10), 5185-5198 (2016).
2. Qaisar, R., Bhaskaran, S., Ranjit, R., *et al.* Restoration of SERCA ATPase prevents oxidative stress-related muscle atrophy and weakness. *Redox Biol.* **20**, 68-74 (2019).
3. Dahl, R. A new target for Parkinson's disease: Small molecule SERCA activator CDN1163 ameliorates dyskinesia in 6-OHDA-lesioned rats. *Bioorg. Med. Chem.* **25**(1), 53-57 (2017).

#### 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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