

PRODUCT INFORMATION



TR-107

Item No. 42445

CAS Registry No.: 2485052-87-5

Formal Name: 3-[[3-[(4-chlorophenyl)methyl]-3,5,7,8-tetrahydro-4-oxopyrido[4,3-d]pyrimidin-6(4H)-yl]methyl]-benzonitrile

MF: C₂₂H₁₉ClN₄O

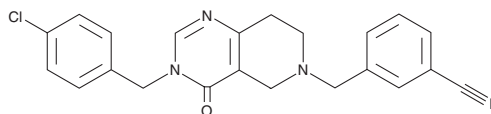
FW: 390.9

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

TR-107 is supplied as a solid. A stock solution may be made by dissolving the TR-107 in the solvent of choice, which should be purged with an inert gas. TR-107 is soluble (≥10 mg/ml) in DMSO.

Description

TR-107 is an activator of the caseinolytic protease P (ClpP; EC₅₀ = 140 nM).¹ It reduces the proliferation of MDA-MB-231 and SUM159 breast cancer cells (IC₅₀ = 23 and 12 nM, respectively). TR-107 (10 or 100 nM) decreases the levels of elongation factor Tu (EF-Tu), mitochondrial transcription factor A (TFAM), isocitrate dehydrogenase (IDH), heat shock protein 60, (Hsp60), and mitochondrial complex II, also known as succinate dehydrogenase, in a ClpP-dependent manner in MDA-MB-231 and SUM159 cells. It reduces oxygen consumption rate, basal mitochondrial respiration, ATP production-linked oxygen consumption, maximal respiration, spare respiratory capacity, and extracellular acidification in a ClpP-dependent manner in MDA-MB-231 cells when used at a concentration of 50 nM. TR-107 decreases tumor volume in an MDA-MB-231 mouse xenograft model.

Reference

1. Fennell, E.M.J., Aponte-Collazo, L.J., Wynn, J.D., *et al.* Characterization of TR-107, a novel chemical activator of the human mitochondrial protease ClpP. *Pharmacol. Res. Perspect.* **10**(4), e00993 (2022).

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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