

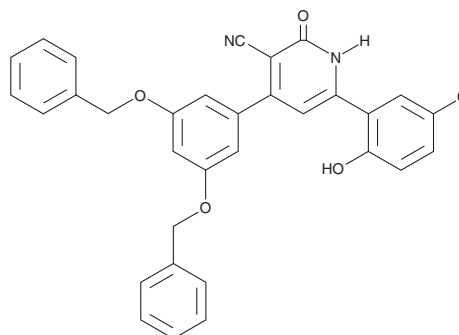
# PRODUCT INFORMATION



## LLP-3

Item No. 19088

**CAS Registry No.:** 1453835-43-2  
**Formal Name:** 4-[3,5-bis(phenylmethoxy)phenyl]-6-(5-chloro-2-hydroxyphenyl)-1,2-dihydro-2-oxo-3-pyridinecarbonitrile  
**MF:** C<sub>32</sub>H<sub>23</sub>ClN<sub>2</sub>O<sub>4</sub>  
**FW:** 535.0  
**Purity:** ≥95%  
**UV/Vis.:** λ<sub>max</sub>: 372 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

LLP-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the LLP-3 in the solvent of choice. LLP-3 is soluble in organic solvents such as DMSO and dimethyl formamide (DMF), which should be purged with an inert gas. The solubility of LLP-3 in these solvents is approximately 2 mg/ml.

LLP-3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, LLP-3 should first be dissolved in DMF and then diluted with the aqueous buffer of choice. LLP-3 has a solubility of approximately 0.3 mg/ml in a 1:2 solution of DMF:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

## Description

Survivin (also known as baculoviral IAP repeat-containing protein 5 (BIRC5)) is a member of the inhibitor of apoptosis (IAP) family that interacts with and inhibits the apoptotic function of several proteins.<sup>1,2</sup> LLP-3 is a cell-permeable ligand of Survivin that blocks its interaction with Ran, resulting in the induction of apoptosis in glioma stem cells (IC<sub>50</sub> = 31 μM).<sup>3</sup> It abolishes the growth of glioblastoma multiforme cell in spheres and in tumor slice cultures.<sup>3</sup>

## References

1. Ryan, B.M., O'Donovan, N., and Duffy, M.J. Survivin: A new target for anti-cancer therapy. *Cancer Treat. Rev.* **35**, 553-562 (2009).
2. Shin, S., Sung, B.-J., Cho, Y.S., *et al.* An anti-apoptotic protein human survivin is a direct inhibitor of caspase-3 and -7. *Biochemistry* **40**, 1117-1123 (2001).
3. Guvenc, H., Pavlyukov, M.S., Joshi, K., *et al.* Impairment of glioma stem cell survival and growth by a novel inhibitor for Survivin-Ran protein complex. *Clin. Cancer Res.* **19**(3), 631-642 (2013).

### 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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