

Product Datasheet

SBP-7455

Catalog No. **BP-01945** · CAS **1884222-74-5** · Form **free base** · Physical state **solid** · Color **White to off-white** · Version **1.0** · Revision **2026-09-03**

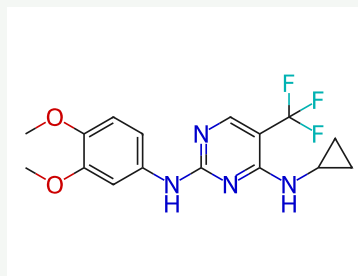
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Target ULK; Autophagy	Research area Cancer
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Molecular formula **C₁₆H₁₇F₃N₄O₂**

Molecular weight **354.3270**

STRUCTURE



DESCRIPTION

SBP-7455 is a potent, high affinity and orally active dual ULK1/ULK2 autophagy inhibitor with IC₅₀s of 13 nM and 476 nM in the ADP-Glo assays, respectively. SBP-7455 potently inhibits ULK1/2 enzymatic activity and can be used for triple-negative breast cancer (TNBC) research.

BIOLOGICAL ACTIVITY

In Vitro

SBP-7455 (compound 26; 72 h) treatment inhibits cell growth with an IC₅₀ of 0.3 μM for MDA-MB-468 cells. SBP-7455 inhibits starvation-induced autophagic flux in TNBC cells that are dependent on autophagy for survival.

In Vivo

A single dose of SBP-7455 (compound 26) (30 mg/kg) is orally administered to mice. The T_{max} for SBP-7455 is approximately 1 h, the C_{max} is 990 nM and the T_{1/2} is 1.7 h. The plasma concentration of SBP-7455 remains above the ULK1 IC₅₀ for almost 4 h after oral dosing.

? The mice are dosed with SBP-7455 (compound 26) (10 mg/kg) by oral gavage, and liver samples were collected after 2 h. The results reveals robust inhibition of pATG13 (Ser318), as well as downregulation of total ATG13 and ULK1 levels by SBP-7455.

SOLUBILITY

Soluble in DMSO : 125 mg/mL

REFERENCES

[1]. Huiyu Ren, et al. Design, Synthesis, and Characterization of an Orally Active Dual-Specific ULK1/2 Autophagy Inhibitor that Synergizes with the PARP Inhibitor Olaparib for the Treatment of Triple-Negative Breast Cancer. J Med

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