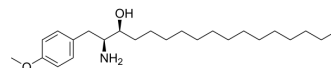


Autophagy inducer 3

| | | | |
|--------------------|---|-------|----------|
| Cat. No.: | HY-146052 | | |
| CAS No.: | 2691054-63-2 | | |
| Molecular Formula: | C ₂₄ H ₄₃ NO ₂ | | |
| Molecular Weight: | 377.6 | | |
| Target: | Autophagy; Atg8/LC3 | | |
| Pathway: | Autophagy | | |
| Storage: | Powder | -20°C | 3 years |
| | | 4°C | 2 years |
| | In solvent | -80°C | 6 months |
| | | -20°C | 1 month |



SOLVENT & SOLUBILITY

| | | | | | |
|---|---|--------------------------|--------------|------------|------------|
| In Vitro | Ethanol : 100 mg/mL (264.83 mM; Need ultrasonic) | | | | |
| | | Solvent Concentration | Mass 1 mg | 5 mg | 10 mg |
| | Preparing Stock Solutions | 1 mM | 2.6483 mL | 13.2415 mL | 26.4830 mL |
| | | 5 mM | 0.5297 mL | 2.6483 mL | 5.2966 mL |
| | | 10 mM | 0.2648 mL | 1.3242 mL | 2.6483 mL |
| Please refer to the solubility information to select the appropriate solvent. | | | | | |
| In Vivo | 1. Add each solvent one by one: 10% EtOH >> 40% PEG300 >> 5% Tween-80 >> 45% saline Solubility: 2.5 mg/mL (6.62 mM); Clear solution; Need ultrasonic | | | | |
| | 2. Add each solvent one by one: 10% EtOH >> 90% corn oil Solubility: 2.5 mg/mL (6.62 mM); Clear solution; Need ultrasonic | | | | |

BIOLOGICAL ACTIVITY

| | |
|---------------------------|--|
| Description | Autophagy inducer 3 has autophagy induced activity. Autophagy inducer 3 possesses robust autophagic cell death in diverse cancer cells sparing normal counterpart. Autophagy inducer 3 induces lethal autophagy by formation of characteristic autophagic vacuoles, LC3 puncta formation, upregulation of signature autophagy markers like Beclin and Atg family proteins ^[1] . |
| IC ₅₀ & Target | Autophagy ^[1] |
| In Vitro | Autophagy inducer 3 (compound 26b) (10 μM; 48 hours) effectively inhibits cell growth in diverse breast, lung and colon cancer cell lines ^[1] . Autophagy inducer 3 (0-10 μM; 48 hours) exhibits potent antiproliferative activity in COLO-205, LOVO, HT-29, DLD-1, SW48 |

and SW-620 with IC₅₀s of 2.03 μM, 3.33 μM, 4.15 μM, 4.46 μM, 3.14 μM, 1.86 μM, respectively; and shows low cytotoxicity in normal human colon fibroblast CCD-18Co with IC₅₀ over 10 μM^[1].

Autophagy inducer 3 (7.5 μM; 18 hours) promotes non apoptotic cell death in DLD-1 cells by cellular granularity through vacuole formation and increase Annexin-V positive cells as well as PARP cleavage; and robustly induces the expression of classical autophagy markers like Beclin-1, Atg3, Atg5 and Atg7^[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Cell Proliferation Assay

| | |
|------------------|---|
| Cell Line: | MCF-7, MDA-MB-231, DLD-1, HT-29, A549 and NCI-H358 ^[1] |
| Concentration: | 10 μM |
| Incubation Time: | 48 hours |
| Result: | Effectively inhibited cell growth at 10 μM dose in diverse cancer cell lines with the inhibition rates of 89.28~97.66%. |

Cell Autophagy Assay

| | |
|------------------|--|
| Cell Line: | DLD-1 ^[1] |
| Concentration: | 7.5 μM |
| Incubation Time: | 18 hours |
| Result: | Promoted intracytoplasmic vacuole accumulation in colon cancer (DLD-1) cells; and robustly induced the expression of classical autophagy markers like Beclin-1, Atg3, Atg5 and Atg7. |

REFERENCES

[1]. Ganesh A, et al. New Spisulosine Derivative promotes robust autophagic response to cancer cells. Eur J Med Chem. 2020;188:112011.

Caution: Product has not been fully validated for medical applications. For research use only.

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