Gol-NTR

Cat. No.: HY-151537

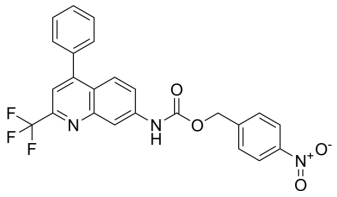
Molecular Formula: $C_{24}H_{16}F_3N_3O_4$

Molecular Weight: 467.4

Target: Fluorescent Dye

Pathway: Others

Storage: Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Gol-NTR is a Golgi-targetable probe with high selectivity and sensitivity. Gol-NTR is Nitroreductase (NTR)-activated and has visualization acute lung injury (ALI) and repair function. Gol-NTR has a low detection limit of 54.8 ng/mL. Gol-NTR can be used for the research for monitoring and assessing research response of sepsis-induced ALI[1].
In Vitro	Fluorescent labeling of NTR by Gol-NTR[1] (1) Prepare 1.0 mM Gol-NTR stock solution with DMSO solution. (2) Dilute the stock solution with DMSO solution to prepare 5.0 μM Gol-NTR working solution. (3) Mix 5.0 μM Gol-NTR with 50 μM NADH in PBS buffer (10 mM, pH 7.4) containing 5% DMSO, and then add appropriate NTR. (4) After incubation at 37℃ for 30 min, the spectra was recorded at 405 nm (slit width: d_{ex}/d_{em}=5/5 nm). Fluorescence labeling of NTR in A549 cells by Gol-NTR[1] (1) A549 cells were cultured at different oxygen concentrations (1%, 5%, 10%, 15% and 20% O_2) for 8 h. (2) A549 cells were washed with phosphate buffered saline (PBS). (3) A549 cells were treated with 5.0 μM Gol-NTR for 1 h. (4) Fluorescence images of A549 cells were observed using confocal fluorescence imaging. MCE has not independently confirmed the accuracy of these methods. They are for reference only.
In Vivo	In Vivo Imaging[1] (1) C57BL/6 male mice (6-8 weeks old, weight 20-22 g) were pre injected with 300 μL DMOG (25 mg/mL), after 24 h, intraperitoneal injection of 300 μL LPS (10 mg/kg) for 6 h. (2) Mice were killed by cervical vertebra dislocation and lung organs were collected. (3) After washing with PBS, incubate with 50 μM Gol-NTR in PBS for 1 h. (4) After washing with PBS, fluorescence imaging was performed on a small animal imaging system (excitation wavelength of 420 nm and emission wavelength of 510 nm). MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Tang Z, et al. Precise Monitoring and Assessing Treatment Response of Sepsis-Induced Acute Lung Hypoxia with a Nitroreductase-Activated Golgi-Targetable Fluorescent Probe. Anal Chem. 2022 Oct 25;94(42):14778-14784.

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

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