
Product Data Sheet

Product Name: IQ-R
 Cat. No.: GC30477

Chemical Properties

Cas. No. 1345445-57-9

SMILES O=C(C=C1OC)C(N2C)=C(C1=O)C(COC(C3=C(C=CC=C3)C4=C(C=C5)C(OC6=CC(N(C)C)=CC=C64)=CC5=O)=O)=C2C

Formula $C_{34}H_{28}N_2O_7$ M.Wt 576.6

Solubility Soluble in DMSO Storage Store at $-20^{\circ}C$

General For obtaining a higher solubility, please warm the tube at $37^{\circ}C$ and shake it in the ultrasonic bath for a while. Stock solution can be stored below $-20^{\circ}C$ for several months.

Shipping Condition Evaluation sample solution : ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure

Background

IQ-R is a novel hypoxia-sensitive fluorescent probe, consisting of an indolequinone unit and a rhodol fluorophore. Target: IQ-R has good solubility in water and longer wavelength for absorption and emission, which are favorable for cellular bioimaging. While the fluorescence of rhodol in the IQ-R conjugate is quenched by the function of intramolecular indolequinone unit, it is restored under hypoxic conditions through the enzymatic one-electron reduction of IQ-R by NADPH: cytochrome P450 reductase to release the nonconjugated free rhodol. When administered to A549 cells, IQ-R is activated and reduced by endogenous reductase preferentially under hypoxic conditions, thereby visualizing hypoxic cancer cells by robust fluorescence.

References:

[1]. Hirokazu Komatsu, et al. Indolequinone-rhodol conjugate as a fluorescent probe for hypoxic cells: enzymatic activation and fluorescence properties. Med. Chem. Commun., 2010,1, 50-53

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

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