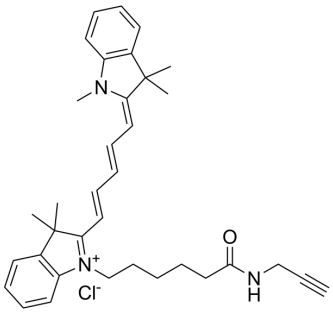
Cyanine5 alkyne

Cat. No.:	HY-137042
CAS No.:	1223357-57-0
Molecular Formula:	$C_{35}H_{42}ClN_3O$
Molecular Weight:	556.18
Target:	Mitochondrial Metabolism; Oxidative Phosphorylation
Pathway:	Metabolic Enzyme/Protease
Storage:	Please store the product under the recommended conditions in the Certificate of Analysis.



BIOLOGICAL ACTIVITY

Description	Cyanine5 alkyne (Alkyne-Cy5) is a fluorescent dye used to label azide proteins and can be used to analyse post-translational modifications of proteins, glycosylation etc. Cyanine5 alkyne can also be used as a mitochondrial OXPHOS inhibitor to inhibit the growth of cancer stem cells (CSC)[1][2]. Cyanine5 alkyne is a click chemistry reagent, it contains an Alkyne group and can undergo copper-catalyzed azide-alkyne cycloaddition (CuAAc) with molecules containing Azide groups.
In Vitro	Cyanine5 alkyne (Alkyne-Cy5) (1-1000 nM) significantly inhibits 3D mammosphere formation in MCF7 cells between 500 nM and 1000 nM and can act as a mitochondrial oxidative phosphorylation (OXPHOS) inhibitor, inducing glycolysis to compensate for mitochondrial ATP depletion[2]. MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Amanda R Burnham-Marusich, et al. Size-matched alkyne-conjugated cyanine fluorophores to identify differences in protein glycosylation. Electrophoresis. 2014 Sep;35(18):2621-5.

[2]. Camillo Sargiacomo, et al. MitoTracker Deep Red (MTDR) Is a Metabolic Inhibitor for Targeting Mitochondria and Eradicating Cancer Stem Cells (CSCs), With Anti-Tumor and Anti-Metastatic Activity In Vivo. Front Oncol. 2021 Jul 30;11:678343.

Tel: 609-228-6898 Fax: 609-228-5909 E-mail: tech@MedChemExpress.com

Address: 1 Deer Park Dr, Suite Q, Monmouth Junction, NJ 08852, USA