Data Sheet (Cat.No.T35862)

TargetMol

Cucurbit[8]uril

Chemical Properties

CAS No. :	259886-51-6
Formula:	C48H48N32O16
Molecular Weight:	1329.1
Storage:	Powder: -20°C for 3 years | In solvent: -80°C for 1 year Actual storage temperature shall be subject to the COA.

Biological Description

Description	Cucurbit[8]uril is a highly effective and safe supramolecular compound that promotes protein heterodimerization. It selectively induces the heterodimerization of methylviologen and naphthalene functionalized proteins, demonstrating its specificity and versatility. Additionally, Cucurbit[8]uril shows exceptional oral activity and low toxicity, making it a promising candidate for various pharmaceutical and biotechnological applications.
Targets(IC50)	Others
In vitro	Cucurbit[8]uril (0~20 μM; 48 hours; CHO-K1 cells) marginally reduces cell viability to 86% [2]. It selectively induces heterodimerization of MV-eYFP with Np-eCFP and high energy transfer between the proteins, observed only with all three supramolecular components forming the ternary complex. Cucurbit[8]uril inhibits unspecific protein assembly induced by methylviologen and enables the formation of selective protein heterodimers with more hydrophobic proteins. It prevents MV-induced unspecific dimerization with hydrophobic protein surfaces[1].
In vivo	Cucurbit[8]uril exhibits minimal toxicity when administered either intravenously or orally in mice, as demonstrated by in vivo studies[2].

Solubility Information

Solubility	DMSO: < 1 mg/mL (< 1 mg/ml refers to the product slightly soluble or insoluble)

Preparing Stock Solutions

	1mg	5mg	10mg
1 mM	0.7524 mL	3.7619 mL	7.5239 mL
5 mM	0.1505 mL	0.7524 mL	1.5048 mL
10 mM	0.0752 mL	0.3762 mL	0.7524 mL
50 mM	0.015 mL	0.0752 mL	0.1505 mL

Please select the appropriate solvent to prepare the stock solution, according to the solubility of the product in different solvents. Please use it as soon as possible.

Note: The dilution table applies only to solid products. For liquid products, please calculate the stock solution based on the stated concentration and/or density.

Reference

Uhlenheuer DA, et al. Cucurbit[8]uril induced heterodimerization of methylviologen and naphthalene functionalized proteins. Chem Commun (Camb). 2011;47(24):6798-6800.
Uzunova VD, et al. Toxicity of cucurbit[7]uril and cucurbit[8]uril: an exploratory in vitro and in vivo study. Org Biomol Chem. 2010;8(9):2037-2042.