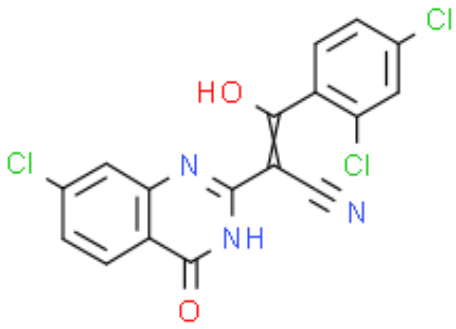
Product Data Sheet

Cas No.:	1370554-01-0	Cat. No:	PL02550
Product Name:	Ciliobrevin D		
Product synonym:	-		
Chemical name:	Ciliobrevin D		
MF:	C17H8CL3N3O2	FW:	392.623320579529
Purity:	≥99%	Batch No.:	-
Storage:			
Structural formula:			
λmax：	-	Formulation：	-
Solubility :			
SMILES :	ClC1=CC2C(NC(C(C#N)=C(C3C=CC(=CC=3Cl)Cl)O)=NC=2C=1)=O		
InChI Code:	-		
InChI Key:			
WARNING This product is not for human or veterinary use.			

Product Description

Ciliobrevin D 是一种细胞渗透性，可逆和特异性的 AAA + ATPase 运动细胞质动力蛋白抑制剂。Ciliobrevin D 抑制 Hedgehog (Hh) 信号和初级纤毛形成。Ciliobrevin D 在体外抑制依赖于动力蛋白的微管滑动和 ATPase 活性。

生物活性	Ciliobrevin D is a cell-permeable, reversible and specific inhibitor of AAA+ ATPase motor cytoplasmic dynein. Ciliobrevin D inhibits Hedgehog (Hh) signaling and primary cilia formation. Ciliobrevin D inhibits dynein-dependent microtubule gliding and ATPase activity in vitro.
IC50 & Target[1][2]	Cytoplasmic dynein
体外研究(In Vitro)	Cells treated with Ciliobrevin D exhibits abnormal (unfocused, multipolar, or collapsed) spindles with disrupted γ-tubulin localization in NIH-3T3 cells. Similar Ciliobrevin-induced spindle defects are observed in HeLa cells, although to a lesser extent. Ciliobrevin D addition also reversibly disrupts the pre-formed spindles of metaphase-arrested cells and reduces overall microtubule levels. .Ciliobrevin D reversibly inhibits melanosome aggregation, but the non-cilia-disrupting derivative had no discernible effect at comparable doses. Ciliobrevin D similarly abrogates the movement of peroxisomes in Drosophila S2 cells. has not independently confirmed the accuracy of these methods. They are for reference only.

体内研究(In Vivo)	Knockdown of Dync1h1 or inactivation of dynein 1 by Ciliobrevin D in the testis in vivo perturbs spermatogenesis. Knockdown of Dync1h1 or the use of Ciliobrevin D to inactivate dynein 1 in the testis in vivo perturbs MT organization through changes in the spatial expression of EB1, perturbs F-actin organization, and perturbs distribution of adhesion protein complexes at the BTB, leading to a loss of BTB integrity. F-actin disorganization in the seminiferous epithelium following Dync1h1 knockdown or dynein 1 inactivation by Ciliobrevin D is mediated by changes in the spatiotemporal expression of actin regulatory proteins Arp3 and Eps8. has not independently confirmed the accuracy of these methods. They are for reference only.
包装储存	Powder -20°C 3 years； 4°C 2 years
溶解度数据	In Vitro: DMSO : 5 mg/mL (12.73 mM; ultrasonic and warming and heat to 80°C)配制储备液