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Produktinformation

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- Diagnostik & molekulare Diagnostik
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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

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Cotadutide

Cat. No.:	HY-P2231
CAS No.:	1686108-82-6
Molecular Formula:	$C_{167}H_{252}N_{42}O_{55}$
Molecular Weight:	3728.09
Sequence:	1'-{palmtoyl-Glu}; His-Ser-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Lys-Ser-Glu-Tyr-Leu-Asp-Ser-Glu-Arg-Ala-Arg-Asp-Phe-Val-Ala-Trp-Leu-Glu-Ala-Gly-Gly (Amide bridge: 1'-{palmtoyl-Glu}-Lys10)
Sequence Shortening:	1'-{palmtoyl-Glu}; HSQGTFTSDKSEYLDSERARDFVAWLEAGG (Amide bridge: 1'-{palmtoyl-Glu}-Lys10)
Target:	GCGR
Pathway:	GPCR/G Protein
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

1'-{palmtoyl-Glu}; His-Ser-Gln-Gly-Thr-Phe-Thr-Ser-Asp-Lys-Ser-Glu-Tyr-Leu-Asp-Ser-Glu-Arg-Ala-Arg-Asp-Phe-Val-Ala-Trp-Leu-Glu-Ala-Gly-Gly (Amide bridge: 1'-{palmtoyl-Glu}-Lys10)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (26.82 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.2682 mL	1.3412 mL	2.6823 mL
	5 mM	0.0536 mL	0.2682 mL	0.5365 mL
	10 mM	0.0268 mL	0.1341 mL	0.2682 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Cotadutide (MEDI0382) is a potent dual agonist of glucagon-like peptide-1 (GLP-1) and GCGR with EC_{50} values of 6.9 pM and 10.2 pM, respectively. Cotadutide exhibits ability to facilitate both weight loss and glycaemic control, and alleviate fibrosis. Cotadutide can be used in the research of obesity and type 2 diabetes (T2D)[1][2][3].

IC_{50} & Target

EC50: 6.9 pM (GLP-1); 10.2 pM (GCGR)[1]

In Vitro

Cotadutide stimulates a concentration-dependent increase in cAMP accumulation in rat (INS-1 832/3) and human (EndoC-βH1) β-cell lines (EC_{50}: 226 pM and 1051 pM, respectively?), as well as rat, mouse and human hepatocytes (EC_{50}: 462 pM, 840 pM, 1447 pM, respectively)[1].

Cotadutide (100 pM-1 μM) potentiates glucose-stimulated insulin secretion in the rat (INS-1 832/3) pancreatic β□cell line and

increases glucose output in rat hepatocytes[1].
Cotadutide (100 nM, 2 h) induces mitochondrial turnover and enhances mitochondrial function in mouse primary hepatocytes[2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Cotadutide (10?nmol/kg, s.c., once) suppresses food intake in DIO mice relative to vehicle‐treated controls[1].
Cotadutide (10 or 30?nmol/kg, s.c., once daily for 14-16 weeks) reduces body weight in DIO mice[1].
Cotadutide (30 nmol/kg, s.c., once a day for 6 weeks) reduces hepatic fibrosis and inflammation in in ob/ob AMLN NASH mice [2].
MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Diet-induced obesity (DIO) mice[1]
Dosage:	10 nmol/kg
Administration:	Subcutaneousinjection (s.c.)
Result:	Showed a redction of food intake in mice after an acute administration.

Animal Model:	Diet-induced obesity (DIO) mice[1]
Dosage:	10 or 30 nmol/kg
Administration:	Subcutaneousinjection (s.c.)
Result:	Reduced body weight and food intake, and improved glucose tolerance in DIO mice.

CUSTOMER VALIDATION

- Adv Sci (Weinh). 2024 Jun 5:e2400819.

See more customer validations on www.MedChemExpress.com

REFERENCES

[1]. Henderson SJ,et al. Robust anti-obesity and metabolic effects of a dual GLP-1/glucagon receptor peptide agonist in rodents and non-human primates.Diabetes Obes Metab. 2016 Dec;18(12):1176-1190.

[2]. Resolution of NASH and hepatic fibrosis by the GLP-1R/GcgR dual-agonist Cotadutide via modulating mitochondrial function and lipogenesis. Nat Metab. 2020 May;2(5):413-431.

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