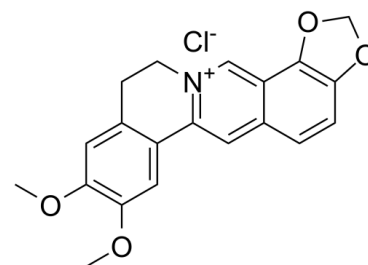


Data Sheet

Product Name:	Epiberberine (chloride)
Cat. No.:	CS-6060
CAS No.:	889665-86-5
Molecular Formula:	C ₂₀ H ₁₈ ClNO ₄
Molecular Weight:	371.81
Target:	AChE; Beta-secretase; Reactive Oxygen Species
Pathway:	Immunology/Inflammation; Metabolic Enzyme/Protease; Neuronal Signaling; NF-κB
Solubility:	DMSO : 7.4 mg/mL (19.90 mM; Need ultrasonic)



BIOLOGICAL ACTIVITY:

Epiberberine chloride is an alkaloid isolated from *Coptis chinensis*, acts as a potent **AChE** and **BChE** inhibitor, and a non-competitive **BACE1** inhibitor, with IC_{50} s of 1.07, 6.03 and 8.55 μ M, respectively. Epiberberine chloride has antioxidant activity, with peroxynitrite $ONOO^-$ scavenging effect (IC_{50} , 16.83 μ M), and may protect against Alzheimer disease^[1]. Epiberberine chloride inhibits the early stage of differentiation of 3T3-L1 preadipocytes, downregulates the Raf/MEK1/2/ERK1/2 and AMPK α /Akt pathways^[2]. Epiberberine has the potential effect in the research of diabetic disease^[3]. **In Vitro:** Epiberberine (0, 12.5, 25, or 50 μ M) dose-dependently inhibits cellular triglyceride accumulation in 3T3-L1 adipocytes, with an IC_{50} of 52.8 μ M^[2].

Epiberberine (12.5-50 μ M) suppresses the Raf/MEK1/ERK1/2 and AMPK α /Akt pathways in the early stage of 3T3-L1 adipocyte differentiation^[2].

Epiberberine (0.2, 1, 5 μ g/mL) inhibits glucose uptake in HepG2 cells in a concentration-dependent manner^[3]. **In Vivo:** Epiberberine (225 mg/kg, p.o. daily for 40 days) reduces body weight, food consumption, water intake, and urinary output of KK-Ay mice^[3].

PROTOCOL (Extracted from published papers and Only for reference)

Animal Administration: Epiberberine is suspended in saline.

References:

[1]. Jung HA, et al. Anti-Alzheimer and antioxidant activities of *Coptidis Rhizoma* alkaloids. *Biol Pharm Bull.* 2009 Aug;32(8):1433-8.

[2]. Choi JS, et al. Anti-adipogenic effect of epiberberine is mediated by regulation of the Raf/MEK1/2/ERK1/2 and AMPK α /Akt pathways. *Arch Pharm Res.* 2015 Dec;38(12):2153-62.

[3]. Ma H, et al. Antihyperglycemia and Antihyperlipidemia Effect of Protoberberine Alkaloids From *Rhizoma Coptidis* in HepG2 Cell and Diabetic KK-Ay Mice. *Drug Dev Res.* 2016 Jun;77(4):163-70.

CAIndexNames:

Benzo[a]-1,3-benzodioxolo[4,5-g]quinolizinium, 11,12-dihydro-8,9-dimethoxy-, chloride (1:1)

SMILES:

COC1=C(OC)C=C2C(CC[N+]3=C2C=C(C=C4)C(C5=C4OCO5)=C3)=C1.[Cl-]

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

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