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Produktinformation

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See the following pages for more information!

Lieferung & Zahlungsart

siehe unsere Liefer- und Versandbedingungen

Zuschläge

- Mindermengenzuschlag
- Trockeneiszuschlag
- Gefahrgutzuschlag
- Expressversand

SZABO-SCANDIC HandelsgmbH

Quellenstraße 110, A-1100 Wien

T. +43(0)1 489 3961-0

F. +43(0)1 489 3961-7

mail@szabo-scandic.com

www.szabo-scandic.com

linkedin.com/company/szaboscandic

Butyl isobutyl phthalate

Cat. No.: HY-N7377

CAS No.: 17851-53-5

Molecular Formula: $C_{16}H_{22}O_4$

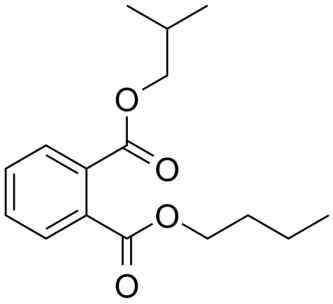
Molecular Weight: 278.34

Target: Glucosidase

Pathway: Metabolic Enzyme/Protease

Storage:

Pure form	-20°C	3 years
	4°C	2 years
In solvent	-80°C	6 months
	-20°C	1 month



SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (359.27 mM; Need ultrasonic)

Preparing Stock Solutions

Solvent / Mass / Concentration	1 mg	5 mg	10 mg
1 mM	3.5927 mL	17.9636 mL	35.9273 mL
5 mM	0.7185 mL	3.5927 mL	7.1855 mL
10 mM	0.3593 mL	1.7964 mL	3.5927 mL

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

In Vivo

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.25 mg/mL (8.08 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.25 mg/mL (8.08 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.25 mg/mL (8.08 mM); Clear solution

BIOLOGICAL ACTIVITY

Description

Butyl isobutyl phthalate is isolated from the rhizoid of Laminaria japonica. Butyl isobutyl phthalate is a non-competitive α-glucosidase inhibitor with an IC_{50} value of 38 μM. Butyl isobutyl phthalate shows a hypoglycemic effect and has the potential for diabetes treatment[1].

IC_{50} & Target

IC50: 38 μM (α-glucosidase)[1]

In Vitro

Butyl isobutyl phthalate exhibits significant, concentration-dependent inhibitory activity against α-glucosidase with an IC_{50}

value of 38 μM[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

In Vivo

Butyl isobutyl phthalate (intragastric administration; 25, 50 or 100 mg/kg; 3 days) results in a more significant reduction in the blood glucose level, with the concentration of blood glucose being 11.50, 8.60 and 6.50 mM, respectively[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

Animal Model:	Streptozocin induced diabetic mice (Male Kunming mice)[1]
Dosage:	25, 50 or 100 mg/kg
Administration:	Intragastric administration
Result:	Had the observed antidiabetes activity in mice.

REFERENCES

[1]. Bu T, et al.α-Glucosidase inhibition and the in vivo hypoglycemic effect of butyl-isobutyl-phthalate derived from the Laminaria japonica rhizoid.Phytother Res. 2010 Nov;24(11):1588-91.

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