

SBE-β-CD

Catalog No: tcsc0731



Available Sizes

Size: 1g

Size: 5g

Size: 10g

Size: 25g

Size: 50g



Specifications

CAS No:

182410-00-0

Formula:

N/A

Pathway:

Others

Target:

Others

Purity / Grade:

>98%

Solubility:

DMSO : 5.625 mg/mL (Need ultrasonic and warming); H2O : 75 mg/mL (Need ultrasonic)

Alternative Names:

Sulfobutylether-β-Cyclodextrin

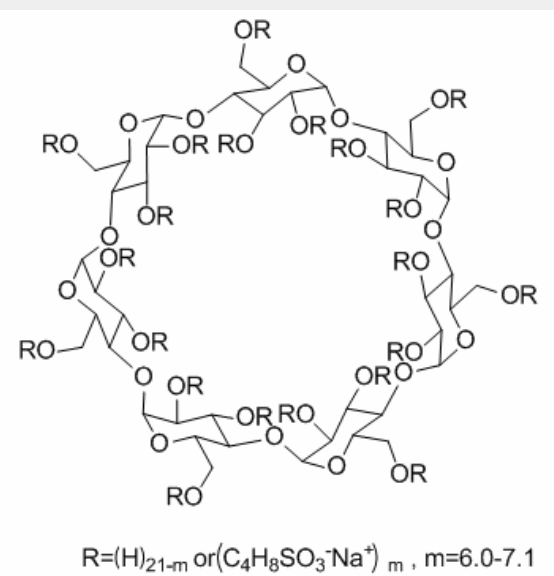
Observed Molecular Weight:
1000

Product Description

SBE- β -CD is a sulfobutylether **β -cyclodextrin** derivative, it is an excipient or a formulating agent used to increase the solubility of poorly soluble drugs.

In Vitro: SBE- β -CD is a chemically modified β -CD that is a cyclic hydrophilic oligosaccharide which is negatively charged in aqueous media. β -CD functioned as a solubilizer only at low concentrations, whereas SBE7- β -CD exhibits strong solubilizing effects over a wide concentration range^[1].

In Vivo: SBE- β -CD is a derivatized form of β -cyclodextrin that has been developed as a safe and effective solubilizing agent for drugs being administered by parenteral and other routes (including oral). SBE- β -CD is a cyclic carbohydrate comprised of seven glucose molecules; the resulting truncated cone-like structure being further derivatized with an average of seven sulfobutyl ether groups^[2]. The calorimetric data for the Compound 1/SBE- β -CD complex indicates an extremely strong interaction, with an association constant of $2.3 \pm (0.2) \times 10^6 \text{M}^{-1}$ at 25°C and $1.6 \pm (0.2) \times 10^6 \text{M}^{-1}$ at 37°C^[3]. SBE- β -CD alone evokes a mild cardio-depressant effect independent of cocaine treatment ($p=0.0001$ compared to baseline) but attenuates further cocaine-induced decreases in RPP, dP/dtmax, and dP/dtmax_{abs} at high cocaine concentrations. No significant effect is seen on line pressure SBE- β -CD alleviates the most pronounced cardiac depression for RPP, dP/dtmax, and dP/dtmax_{abs}. This differential effect of SBE- β -CD at low and high concentrations produces an interaction effect in the two-way ANOVA for RPP (pabs ($p=0.0015$), and prevents any overall treatment effect. Infusing SBE- β -CD also attenuates the cardiac depression associated with cocaethylene toxicity for RPP and dP/dtmax. No differences are observed between ethanol-treated controls and cocaethylene plus SBE- β -CD groups^[4].



All products are for RESEARCH USE ONLY. Not for diagnostic & therapeutic purposes!