Technical Data Sheet

Compound E

Catalog Number
SM-0002-0010

Synonyms
XXI, Compound E (secretase inhibitor), DuPont E, C-E, γ-secretase inhibitor XXI, Gamma-secretase inhibitor XXI

Size
10 mg

Description
Compound E is a potent γ-secretase inhibitor that specifically blocks β-amyloid-40 (IC₅₀ of 0.24), β-amyloid-42 (IC₅₀ of 0.37), and cleavage of the Notch domain (IC₅₀ of 0.32). Compound E has been shown to promote the differentiation of embryonic stem cells (ESCs) to primitive neural precursors in addition to generating a self-renewing progenitor neuroepithelia stem cell population (Li, et al.) when combined with CHIR99021 (Cat. No. SM-0001-0010), SB431542 (Cat. No. SM-0009-0010), and hLIF. Forebrain GABA interneurons have also been derived from human pluripotent stem cells (PSCs) through the utilization of Compound E (Liu, et al.); additionally, it has shown promising effects in Alzheimer’s disease models using iPSC-derived neurons (Yagi, et al.).

Molecular Weight
490.50

Molecular Formula
C₂₇H₂₄F₂N₄O₃

Chemical Name
Benzeneacetamide, N-[(1S)-2-[(3S)-2,3-dihydro-1-methyl-2-oxo-5-phenyl-1H-1,4-benzodiazepin-3-yl]amino]-1-methyl-2-oxoethyl]-3,5-difluoro-

CAS Number
209986-17-4

Target
γ-secretase

Appearance
White to off-white (Solid)

Purity
≥95% by LCMS

Solubility and Reconstitution
Soluble in DMSO up to 100mM, for example:
10 mg/101.936 mL = 0.098 mg/mL = 0.2 mM
10 mg/20.387 mL = 0.491 mg/mL = 1 mM
10 mg/4.078 mL = 2.452 mg/mL = 5 mM
10 mg/2.0387 mL = 4.905 mg/mL = 10 mM

Storage and Stability
Store at:
- Powder: -20°C 3 years
- In solvent: -80°C 6 months
- 20°C 1 month
References

