Small Molecules

Compound E

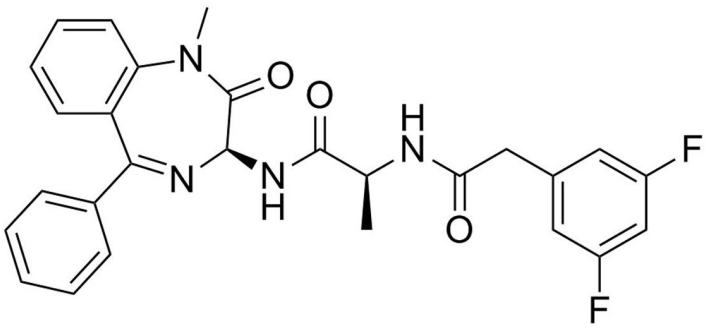
Notch pathway inhibitor; Inhibits Notch receptor and amyloid precursor protein

Catalog #	73952	500 µg
	73954	1 mg

STEMCELL™ TECHNOLOGIES
Scientists Helping Scientists™ | WWW.STEMCELL.COM
TOLL FREE PHONE 1 800 667 0322 • PHONE +1 604 877 0713
INFO@STEMCELL.COM • TECHSUPPORT@STEMCELL.COM
FOR GLOBAL CONTACT DETAILS VISIT OUR WEBSITE

Product Description

Compound E is a potent, cell-permeable, selective inhibitor that blocks the cleavage of both gamma-secretase and the Notch intracellular domain with similar IC_{50} values, ranging from 0.24 to 0.37 nM (Beher et al.; Seiffert et al.).

Molecular Name:	Compound E
Alternative Names:	γ-Secretase Inhibitor XXI
CAS Number:	209986-17-4
Chemical Formula:	$C_{27}H_{24}F_2N_4O_3$
Molecular Weight:	490.5 g/mol
Purity:	≥ 98%
Chemical Name:	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-benzeneacetamide
Structure:	

Properties

Physical Appearance:	A crystalline solid
Storage:	Product stable at -20°C as supplied. Protect product from prolonged exposure to light. For long-term storage store with a desiccant. Stable as supplied for 12 months from date of receipt.
Solubility:	· DMSO ≤ 40 mM · Absolute ethanol ≤ 4 mM For example, to prepare a 10 mM stock solution in DMSO, resuspend 0.5 mg in 102 µL of DMSO. Prepare stock solution fresh before use. Information regarding stability of small molecules in solution has rarely been reported, however, as a general guide we recommend storage in DMSO at -20°C. Aliquot into working volumes to avoid repeated freeze-thaw cycles. The effect of storage of stock solution on compound performance should be tested for each application. For use as a cell culture supplement, stock solution should be diluted into culture medium immediately before use. Avoid final DMSO concentration above 0.1% due to potential cell toxicity.

Published Applications

DIFFERENTIATION
· Inhibits growth, differentiation, and motility of neuroblastoma cells (Ferrari-Toninelli et al.).
· Accelerates the differentiation of human embryonic stem cells into primitive neural stem cells (Li et al.).

References

Beher D. (2001) Pharmacological knock-down of the presenilin 1 heterodimer by a novel gamma-secretase inhibitor: implications for presenilin biology. J Biol Chem 276(48): 45394–402.
Ferrari-Toninelli G et al. (2010) Targeting Notch pathway induces growth inhibition and differentiation of neuroblastoma cells. Neuro Oncol 12(12): 1231–43.
Li W et al. (2011) Rapid induction and long-term self-renewal of primitive neural precursors from human embryonic stem cells by small molecule inhibitors. Proc Natl Acad Sci USA 108(20): 8299–304.
Seiffert D et al. (2000) Presenilin-1 and -2 are molecular targets for γ-secretase inhibitors. J Biol Chem 275(44): 34086–91.

Related Small Molecules

For a complete list of small molecules available from STEMCELL Technologies, visit www.stemcell.com/smallmolecules or contact us at techsupport@stemcell.com.