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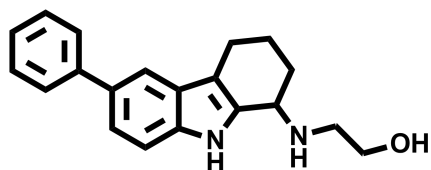
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Cdc42 Inhibitor - CASIN

Chemical Name: 2-((6-phenyl-2,3,4,9-tetrahydro-1H-carbazol-1-yl)amino)ethanol



Molecular Weight:	306.40
Formula:	C ₂₀ H ₂₂ N ₂ O
Purity:	≥98%
CAS#:	425399-05-9
Solubility:	DMSO up to 100mM
Storage	Powder: 4°C 1 year DMSO: 4°C 3 month -20°C 1 year

Biological Activity:

CASIN is a novel and potent Cdc42 inhibitor with an IC₅₀ ~2 μM. In a recent publication in *Cell Stem Cell*, the elevated activity of the small RhoGTPase Cdc42 in aged HSCs was shown to be causally linked to HSC aging and correlate with a loss of polarity in aged HSCs. CASIN as a specific inhibitor of Cdc42 was shown to functionally rejuvenate aged HSCs, increase the percentage of polarized cells in an aged HSC population, and restore the level and spatial distribution of histone H4 lysine 16 acetylation to a status similar to that seen in young HSCs. CASIN-treated HSCs were further shown to engraft long term in vivo with enhanced repopulation ability.

How to Use:

In vitro: CASIN was used at 5 μM final concentration in the in vitro assays and ex vivo treatment of HSCs.

In vivo: not reported yet.

Reference:

1. Florian MC, et al. Cdc42 activity regulates hematopoietic stem cell aging and rejuvenation. (2012) *Cell Stem Cell*. 10(5):520-30.
2. Carrillo-García C, et al. Restoring cell polarity: an HSC fountain of youth. (2012) *Cell Stem Cell*. 10(5):481-2
3. Peterson JR, et al. Biochemical suppression of small-molecule inhibitors: a strategy to identify inhibitor targets and signaling pathway components. (2006) *Chem Biol*.13(4):443-52

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