
Optovin

产品编号: D50776

CAS: 348575-88-2

分子式: C₁₅H₁₃N₃O₂S₂

纯度: ≥98%

InChi: InChi=1S/C₁₅H₁₃N₃O₂S₂/c1-9-6-11(7-13-14(19)17-15(20)21-13)10(2)18(9)12-4-3-5-16-8-12/h3-8H,1-2H3,(H,17,19,20)/b13-7+

InChi Key: YISGMOZSGOGYOU-NTUHNPAUSA-N

Smiles: CC1=C(/C=C2/SC(=S)NC(=O)C=C(C)N1C1C=NC=CC=1

外观: 固体粉末

作用通路: TRP Channel

溶解性: DMSO up to 50 mM

保存条件: Store in dry, dark place for one year.

产品介绍: Optovin is a potent and selective small molecule activator of human TRPA1, identified through a high throughput zebrafish behavior screening. It activates human TRPA1 via photochemical reactions with redox-sensitive cysteine residues (EC₅₀ ~2 μM), and enables repeated photoactivation of motor behaviors in wild-type zebrafish and mice. Optovin's behavioral effects are not visually mediated. Rather, photodetection is performed by sensory neurons expressing the cation channel TRPA1. In animals with severed spinal cords, optovin treatment enables control of motor activity in the paralyzed extremities by localized illumination. These studies identify a light-based strategy for controlling endogenous TRPA1 receptors in vivo, with potential clinical and research applications in nontransgenic animals, including humans.