Succinimidyl 4,4-azipentanoate [NHS-Diazirine]

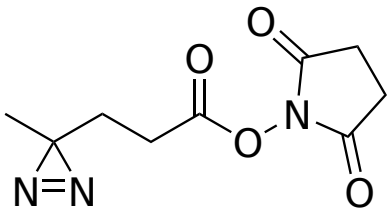
Catalog Number: 39000 39001,
Unit Size: 5 x 1 mg 25 mg,

Product Details

Storage Conditions	Refrigerated (2-8 °C), Desiccated,
Expiration Date	12 months upon recieving

Chemical Properties

Appearance	Solid
Molecular Weight	225.2
Soluble In	DMSO
Chemical Structure	



Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

Succinimidyl 4,4-azipentanoate, also known as NHS-Diazirine, represents a significant breakthrough in crosslinking technology. This compound belongs to a novel class of heterobifunctional crosslinkers (e.g., SDA, LC-SDA, and SDAD) that have effectively combined two established chemical modalities, N-hydroxysuccinimide (NHS) ester chemistry and diazirine-based photoreactions. At pH 7 to 9, the NHS ester groups form covalent amide bonds with primary amines on one protein, while the diazirine (azipentanoate) moieties exhibit efficient reactivity towards amino acid side chains or peptide backbones on another protein within the prescribed spacer arm distance, once activated by long-wave UV light (330-370 nm). SDA's two-step chemical crosslinking process can be easily activated using conventional laboratory UV lamps, streamlining experimental protocols. Furthermore, SDA crosslinkers demonstrate excellent photostability even under standard laboratory lighting conditions, eliminating the need for a light-restricted environment. Given that NHS-ester diazirine derivatives lack a charged group and are membrane-permeable, they are ideally suited for in vivo intracellular and intramembrane conjugations and investigating protein-protein interactions.