

4-Azido-2,3,5,6-tetrafluorobenzamide C2 maleimide

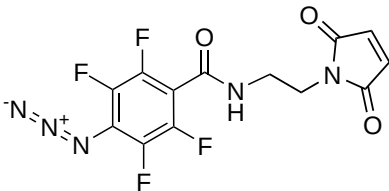
Catalog Number: 39011

Unit Size: 1 mg

Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	24 months upon receiving

Chemical Properties

Appearance	Solid
Molecular Weight	357.22
Soluble In	DMSO
Chemical Structure	

Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

4-Azido-2,3,5,6-tetrafluorobenzamide C2 maleimide is a bifunctional chemical probe that integrates a thiol-reactive maleimide group with a fluorinated phenyl azide photoaffinity handle. The maleimide, linked through a short C2 spacer, enables site-specific conjugation to cysteine residues under physiological conditions. The tetrafluorinated phenyl azide moiety undergoes efficient photoactivation at ~300 nm, a longer wavelength compared to conventional phenyl azides that require ~260 nm irradiation, thereby reducing photodamage to proteins, nucleic acids, and other biomolecules.

Upon UV activation, the azide generates a singlet nitrene intermediate capable of rapid insertion into C-H, N-H, and other proximal bonds, leading to covalent crosslinking of interacting molecules. This property facilitates the capture and stabilization of transient biomolecular interactions, including protein-protein, protein-nucleic acid, and ligand-receptor complexes. The fluorinated aromatic scaffold enhances both stability and analytical detectability, making this reagent suitable for applications in proteomics, structural biology, and mechanistic studies of biomolecular interactions.