

Medetomidine Maleimide

Catalog Number: 50651

Unit Size: 1 mg

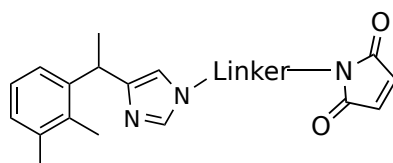
Product Details

Storage Conditions	Freeze (< -15 °C), Minimize light exposure
Expiration Date	12 months upon receiving

Chemical Properties

Appearance	Solid
Molecular Weight	436.56
Soluble In	DMSO

Chemical Structure



Spectral Properties

Excitation Wavelength	N/A
Emission Wavelength	N/A

Applications

Medetomidine Maleimide is a thiol-reactive derivative of medetomidine, a potent and selective α_2 -adrenergic receptor agonist. This compound incorporates a maleimide functional group that enables covalent conjugation to sulfhydryl groups (-SH), commonly found on cysteine residues in peptides and proteins. The maleimide-thiol reaction proceeds rapidly and selectively under mild aqueous conditions (typically pH 6.5–7.5), forming a stable thioether bond. This modification allows medetomidine to be site-specifically incorporated into bioconjugates without compromising its receptor-binding properties.

Medetomidine Maleimide is particularly useful for applications requiring precise conjugation and bioactivity retention, including receptor-targeted delivery systems, ligand-receptor interaction studies, and the development of affinity probes or functionalized materials. Its selectivity and stability make it ideal for constructing well-defined medetomidine conjugates for research and diagnostic use.