

# TCO-amine hydrochloride

Catalog Number: 4536

Unit Size: 5 mg

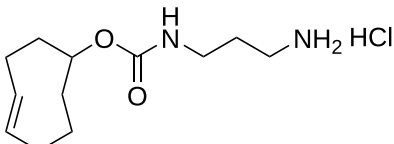
## Product Details

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

## Chemical Properties

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Appearance	Solid
Molecular Weight	262.78
Soluble In	DMF
Chemical Structure	

## Spectral Properties

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Excitation Wavelength	N/A
Emission Wavelength	N/A

## Applications

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TCO-amine hydrochloride is a water-soluble, amine-functionalized trans-cyclooctene (TCO) derivative optimized for bioorthogonal conjugation via the inverse electron-demand Diels–Alder (IEDDA) reaction with tetrazines. The primary amine group enables efficient coupling to electrophilic functional groups such as N-hydroxysuccinimide (NHS) esters or activated carboxylic acids, facilitating covalent attachment to biomolecules including proteins, peptides, and oligonucleotides. The hydrochloride salt form enhances aqueous solubility and improves handling and storage stability. Owing to the rapid kinetics, high specificity, and biocompatibility of the TCO–tetrazine ligation, TCO-amine hydrochloride is particularly well suited for applications requiring fast and selective labeling under physiological conditions. These include live-cell and in vivo imaging, pretargeted therapeutic strategies, and site-specific modification of biomolecules in complex biological systems.