

SiRhius® 650 azide

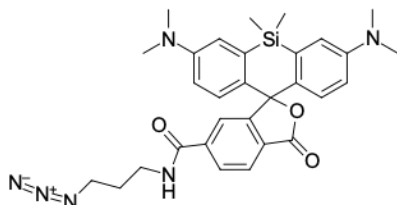
<http://www.lumiprobe.com/p/sir-azide>

SiRhius® 650 azide is a far-red fluorescent dye functionalized with an azide group for bioorthogonal labeling via click chemistry. The probe is designed for rapid and selective conjugation to alkyne-bearing biomolecules using copper-catalyzed (CuAAC) or strain-promoted (SPAAC) cycloaddition reactions.

The SiRhius® 650 fluorophore exhibits excitation and emission maxima in the far-red region (~650/670 nm), enabling deep tissue penetration and low background autofluorescence. Its high molar absorptivity and quantum yield provide a bright signal, while the photostable scaffold enables extended imaging applications, including live-cell and super-resolution microscopy.

The azide functionality is chemically stable under physiological conditions yet highly reactive in click reactions, allowing efficient labeling of proteins, nucleic acids, lipids, and other biomolecules modified with terminal alkynes. The relatively compact size of the azide group minimizes perturbation of the target molecule, preserving biological function.

SiRhius 650® azide is suitable for fluorescence microscopy, flow cytometry, and *in vitro* or *in vivo* imaging workflows where far-red emission and high specificity of labeling are required.



Structure of SiRhius® 650 azide

General properties

Appearance:	light-blue crystals
Molecular weight:	554.71
CAS number:	3031722-00-3
Molecular formula:	C ₃₀ H ₃₄ N ₆ O ₃ Si
Solubility:	DCM, acetonitrile, triethylamine, DMF, DMSO
Quality control:	NMR ¹ H and HPLC-MS (95+%)
Storage conditions:	24 months after receipt at -20°C in the dark. Transportation: at room temperature for up to 3 weeks. Desiccate.
Legal statement:	This Product is offered and sold for research purposes only. It has not been tested for safety and efficacy in food, drug, medical device, cosmetic, commercial or any other use. Supply does not express or imply authorization to use for any other purpose, including, without limitation, <i>in vitro</i> diagnostic purposes, in the manufacture of food or pharmaceutical products, in medical devices or in cosmetic products.

Spectral properties

Excitation/absorption maximum, nm:	646
ε, L·mol ⁻¹ ·cm ⁻¹ :	112000
Emission maximum, nm:	669
Fluorescence quantum yield:	0.57
CF ₂₆₀ :	0.07
CF ₂₈₀ :	0.02