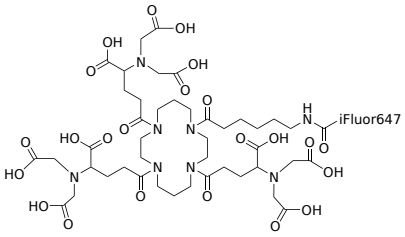
# HIS Lite™ iFluor™ 647 Tris NTA Chelator

Catalog Number: 12658
Unit Size: 100 ug

## Product Details

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

## Chemical Properties

| | |
|---|---|
| Appearance | Solid blue |
| Molecular Weight | 2006.23 |
| Soluble In | DMSO |
| Chemical Structure |  |



## Spectral Properties

| | |
|---|---|
| Excitation Wavelength | 656 nm |
| Emission Wavelength | 670 nm |

## Applications

iFluor® 647 Tris-NTA Chelator is used as a sensitive red fluorescent probe for detecting polyhistidine-labeled proteins in combination with the addition of a heavy metal ion such as Ni2+ in cells, solution and solid surfaces. Fluorescent tris-NTA compounds provide an efficient method for site-specific and stable noncovalent fluorescence labeling of polyhistidine-tagged proteins. In contrast to the transient binding of conventional mono-NTA, the multivalent interaction of tris-NTA conjugated fluorophores form a much more stable complex with polyhistidine-tagged proteins. The high selectivity of tris-NTA compounds toward cumulated histidines enables the selective labeling of proteins in cell lysates and on the surface of live cells. Fluorescent tris-NTA conjugates can be applied for the analysis of a ternary protein complex in solution and on surfaces. In combination with OG488-tris-NTA compound iFluor® 647 Tris-NTA can be used for multicolor analysis of polyhistidine-tagged proteins. AAT Bioquest also offers HIS Lite™ iFluor™ 647 Tris NTA-Ni Complex that can be directly used for the specific and highly sensitive detection of His-tagged fusion proteins without the addition of a heavy metal ion. The transition metal ions (e.g., Ni ion)-mediated complexation of polyhistidine-labeled proteins with fluorescent tris-NTA conjugates provides a sensitive reporter for detecting and monitoring protein-protein interactions in real time.