

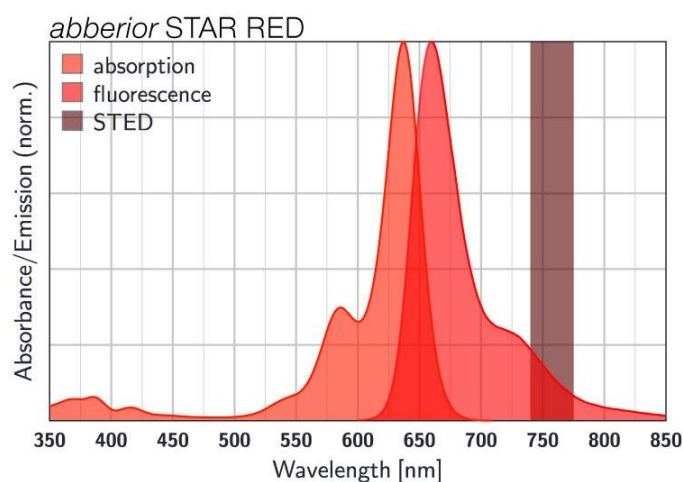
## abberior STAR RED, Halo, 30 nmol

### Item number

STRED-0147-30NMOL

### Description

abberior STAR RED is a well-known red dye, named also KK114 in literature. It was developed for STED and confocal imaging in the red spectral region. It shows an exceptional brightness and low background, delivering stunning STED images. abberior STAR RED can be excited with lasers at wavelength between 630 - 650 nm. For STED, a depletion wavelength around 750 - 800 nm is recommended. abberior STAR RED can substitute dyes like ATTO® 647N, Alexa Fluor® 647, or Cy5®. Our abberior STAR RED is the ideal partner for abberior STAR ORANGE or abberior STAR 580 to obtain optimal 2 color STED results. Best results are obtained with freshly prepared samples.



Discover our abberior STAR GREEN Halo, a cell impermeant label that covalently binds to the active site of your HaloTag fusion protein, whether on the surface of living cells or intracellular targets of fixed cells. This label rapidly binds with exceptional specificity under typical physiological conditions. Each purchase includes 1 vial of lyophilized abberior STAR GREEN Halo, ensuring top-quality performance for STED and confocal microscopy. To achieve optimal results, prepare a stock solution of 1 mM in DMF or DMSO. Adjust the working solution concentration between 0.1  $\mu$ M to 0.5  $\mu$ M based on the cell type, tissue, and expression rate of your HaloTag fusion protein.

## Properties

|                        |                                                             |        |
|------------------------|-------------------------------------------------------------|--------|
| Absorption             | $\lambda_{\text{ex}}$ [nm]                                  | 638    |
| Extinction Coefficient | $\epsilon_{\text{max}}$ [M <sup>-1</sup> cm <sup>-1</sup> ] | 120000 |
| Emission               | $\lambda_{\text{em}}$ [nm]                                  | 655    |
| Quantum Efficiency     | $\eta_{\text{fl}}$ [%]                                      | 90     |
| STED min.              | $\lambda_{\text{STED min}}$ [nm]                            | 750    |
| STED max.              | $\lambda_{\text{STED max}}$ [nm]                            | 800    |
| Fluorescence Lifetime  | $\tau_{\text{fl}}$ [ns]                                     | 3.4    |
| Correction Factor 260  | CF <sub>260</sub>                                           | 0.16   |
| Correction Factor 280  | CF <sub>280</sub>                                           | 0.32   |
| Charge                 | $\Delta q$                                                  | -1     |
| Molecular Weight       | MW [g/mol]                                                  | 1093.6 |
| Derivative/Conjugate   |                                                             | Halo   |

*Photophysical properties were measured for carboxylic acid in PBS pH 7.4.*

## Storage

HaloTag® labels are shipped freeze-dried in amounts of 30 nmol per vial. Upon arrival, the substances can be stored for up to one year at -20 °C. Shortly before the staining procedure dissolve the label in DMF or DMSO. Once dissolved the stock solutions should be kept at 20 °C, protected from light and moisture.

- Depending on solvent quality the shelf-life of the stock solutions might be significantly reduced compared to the substances in their solid form – even if stored at -20 °C.