

TECHNICAL DATA SHEET

Fluorescent Imaging Reagent



AF647-RIS

Catalogue Number: BV500101

* For Laboratory Use. A product for research purposes only, not for human use.

DESCRIPTION: *AF647-RIS* is a fluorescent bisphosphonate imaging reagent, which can be used for both *in vitro* and *in vivo* studies.

CONTENTS: Each vial contains 24 nmol of *AF647-RIS* in lyophilized dry solid form (4 nmol is extra amount added to compensate for the potential compound retaining in syringes and needles during injection). The reagent can be reconstituted with aqueous buffers (calcium/magnesium free PBS buffer, 0.9% NaCl solution, or many other buffers of the customers' choice with near neutral pH).

Table 1. Properties of *AF647-RIS*

Parameter	Value
M.W.	1198 g/mol
Abs Max ¹	648 nm
Em Max ¹	666 nm
Extinction Coefficient ²	240,000 M ⁻¹ cm ⁻¹
Purity ³	> 98 %
Appearance	Blue solid

¹UV-VIS absorption and fluorescence emission were measured in 0.1 M phosphonate buffer, pH 7.0. The maximum wavelengths shown above have ± 1 nm instrumentation error.

²The extinction coefficient for *AF647-RIS* is assumed the same as Alexa Fluor 647.

³Purity is determined by reverse phase HPLC, ¹H NMR, and ³¹P NMR spectroscopy.

PROPERTIES: The physical properties of *AF647-RIS* can be found in **Table 1** and **Figure 1**.

STORAGE & HANDLING:

- Upon receipt, *AF647-RIS* should be **stored at ≤ -20 °C and protected from light**. When stored and handled properly, *AF647-RIS* is stable for at least 18 months in dry solid form.
- Before opening the vial, check to ensure that all compounds are at the bottom of the vial.
- After reconstituting with aqueous buffers, gently swirl the solution to ensure that the solid is fully dissolved in solution.
- Once reconstituted with aqueous buffers, it is highly recommended to aliquot the solutions for longer-term use, and the aliquots should be stored at **4 °C or -20 °C and protected from light**.

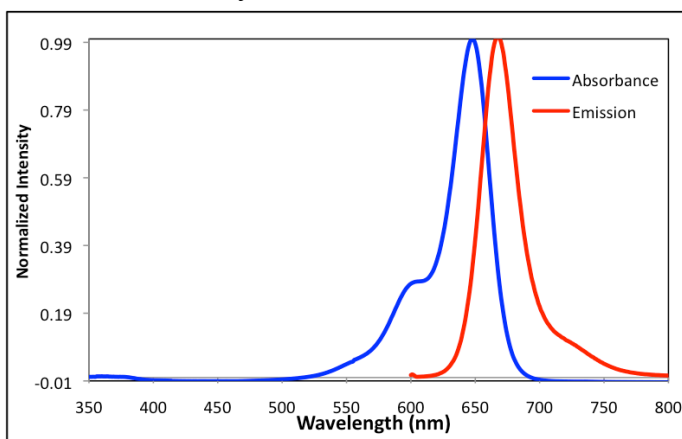


Figure 1. Absorbance and emission spectra of *AF647-RIS*, in 0.1 M phosphate buffer, pH 7.0

IMAGING APPLICATIONS:

- *AF647-RIS* and similar reagents were previously applied in mice, rats and rabbits studies at doses of approximately 50-100 nmol/Kg, which could be a starting point for use in other animal models.
- We also have experience using sequential fluorescent reagents, as well as multiple fluorescent reagents in a single administration; and we would be happy to provide technical advice/support if needed. Please send your technical questions to inquiry@biovinc.com.

SELECTED REFERENCES:

- Kashemirov, B.A.; Bala, J.L.F.; Chen, X.; Ebetino, F.H.; Xia, Z.; Russell, R.G.G.; Coxon, F.P.; Roelofs, A.J.; Rogers, M.J.; McKenna, C.E. [Fluorescently Labeled Risedronate and Related Analogues: "Magic Linker" Synthesis](#). 2008, *Bioconjugate Chemistry*, 19(12): 2308-2310.
- Roelofs, A.J.; Coxon, F.P.; Ebetino, F.H.; Lundy, M.W.; Henneman, Z.J.; Nancollas, G.H.; Sun, S.; Blazewska, K.M.; Bala, J.L.F.; Kashemirov, B.A.; Khalid, A.B.; McKenna, C.E.; Rogers, M.J. [Fluorescent risedronate analogues reveal bisphosphonate uptake by bone marrow monocytes and localization around osteocytes in vivo](#). 2010, *Journal of Bone and Mineral Research*, 25(3): 606-616.
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*For more references, please visit www.biovinc.com/references.

NOTES TO CUSTOMERS:

- BioVinc's fluorescent imaging reagents are offered for research purposes only, and are not intended for human use.
- The purchase of this product conveys to the buyer the limited, non-transferable right to use the purchased amount of the product and the components of the product in research conducted by the buyer. BioVinc's products are not available for resale or other commercial uses without a specific agreement from BioVinc LLC.