# Custom Conjugation Services

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## Custom Labels

NanoTag Biotechnologies offers Custom Conjugation Services for all single-domain antibodies (sdAbs). Custom conjugations can be performed with most commercially available labels, provided these are available in a thiol-reactive activated form.

**The Custom Conjugation Service works as follows:**

- You select the label you require and the sdAb variant (see below) for conjugation.
- After consultation with us, either you purchase the activated label and send us the unopened original vial or we purchase the dye and add the costs to your invoice.
- We carry out the conjugation reaction, including the following aspects:
  - Provision of the unconjugated sdAb as input material (250 µg)
  - Conjugation reaction according to established standard protocols
  - Removal of excess label by gel filtration (group separation), if applicable. Expected loss of material: ~20-40%.
- We perform a standard quality control by photometric determination of the degree of labeling (DOL), if applicable. The precise determination of DOL requires accurate absorption coefficients and correction factors for absorption at 280 nm.
- You will receive the conjugated sdAb (expected yield 150-200 µg), lyophilized from PBS + 2% BSA (US origin). Other formulations are available on request and may be subject to extra charges.

**Important Note:**

- Due to the unknown nature and properties of the label selected by the customer, NanoTag Biotechnologies cannot guarantee the performance of the product.

**Variants** (only a selection of these variants may be available for a given sdAb):

- **sdAb-Q** A single sdAb conjugated to a single label, minimal spacing between target protein and the fluorophore.
- **sdAb-QC** A single sdAb conjugated to a single label. More relaxed positioning of the label also allowing for large size and optimal accessibility of the conjugated moiety.
- **sdAb-X2** A single sdAb conjugated to two labels.
- **sdAb-X4** A blend of two different sdAb clones binding to a single target. Each of the sdAbs is individually conjugated to two labels. **For custom conjugations of X4 reagents, two individual custom conjugation reactions have to be ordered, one for each of both sdAbs-X2 clones in the blend.**



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# Fluorescent Conjugates

NanoTag Biotechnologies offers Custom Conjugation Services for all available variants of FluoTag® reagents. Custom conjugations can be performed with most commercially available fluorophores, provided these are available in a thiol-reactive activated form.

**The Custom Conjugation Service works as follows:**

- You select the fluorophore you require and the FluoTag® variant (see below) for conjugation.
- After consultation with us, either you purchase the activated dye and send us the unopened original vial or we purchase the dye and add the costs to your invoice.
- We carry out the conjugation reaction, including the following aspects:
  - Provision of the unconjugated sdAb as input material
  - Conjugation reaction according to established standard protocols
  - Removal of excess dye by gel filtration (group separation)
- We perform a standard quality control by photometric determination of the degree of labeling (DOL) if applicable. The precise determination of DOL requires accurate absorption coefficients and correction factors for absorption at 280 nm.
- You will receive an amount equivalent to **two vials** of the corresponding FluoTag® product, lyophilized from PBS + 2% BSA (US origin). Other formulations are available on request and may be subject to extra charges.

**Important Note:**

- Due to the unknown nature and properties of the fluorophores selected by the customer, NanoTag Biotechnologies cannot guarantee the performance of the product.

**FluoTag® variants** (only a selection of these variants may be available for a given sdAb):

- **FluoTag®-Q:** A single sdAb conjugated to a single fluorophore, minimal spacing between target protein and the fluorophore. Ideal for quantitative readout once a small fluorophore/dye is conjugated.
- **FluoTag®-QC:** A single sdAb conjugated to a single fluorophore/label. More relaxed positioning of the fluorophore/dye also allowing for large size and optimal accessibility of the conjugated moiety.
- **FluoTag®-X2:** A single sdAb conjugated to two fluorophores/labels, our standard variant.
- **FluoTag®-X4**: A blend of two different FluoTags®-X2 that bind to a single target. FluoTag®-X4 reagents effectively label the target (T) with 4 fluorophores in total, resulting in brighter signals. **For custom conjugations of FluoTags®-X4, two individual custom conjugation reactions have to be ordered, one for each of both FluoTags®-X2 variants in the blend.**

**Only for research applications, not for diagnostic or therapeutic use!**



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