

## CF® Dye Aminoxy

CF® Dyes with an aminoxy reactive group are useful for fluorescently labeling aldehyde or ketone groups on target molecules such as polysaccharides, glycoproteins or antibodies.



### Product attributes

|  |  |
|--|--|
| <b>Chemical reactivity (reacts with)</b> | Aldehydes/ketones                          |
| <b>Functional group</b>                  | Aminoxy (hydroxylamine)                    |
| <b>Storage Conditions</b>                | Store at -10 to -35 °C, Protect from light |

## Product Description

CF® Dye aminoxy (aka hydroxylamine or aminoxyacetamide) derivatives are reactive molecules that readily react with aldehyde or ketone groups to form a stable oxime linkage, without the use of reducing agents.

- Stable labeling of aldehyde or ketone groups on polysaccharides, glycoproteins or antibodies.
- Bright, photostable and water-soluble CF® Dyes, excellent options for fluorescent labeling.
- Available in a range of dye colors, from UV to near-infrared (NIR).

We also offer [Aminoxy-biotin](#) for covalent attachment of biotin to molecules with aldehyde or ketone groups, as well as [CF®DI Aminoxy](#) derivatives which are designed to be size- and charge-matched to each other so as not to alter the molecular weight or pI of the labeled protein.

CF® Dyes are Biotium's line of next-generation fluorescent dyes that have improved brightness, photostability and water solubility compared to other commercially available fluorescent dyes. Learn more about [CF® Dyes](#). For more information download the [CF® Dye Brochure](#).

### Advantages of Aminoxy Labeling

Aminoxy reagents offer a convenient and rapid way to label glycoproteins with a detectable tag, such as a fluorescent dye or biotin, under mild conditions. Aminoxy groups react with molecules containing aldehyde or ketone groups to form a stable oxime linkage in aqueous solutions, at neutral/acidic pH. The reaction is rapid, but can be further accelerated using a catalyst like aniline. Aminoxy reagents are therefore superior to hydrazides, which also react with aldehydes or ketones but form unstable hydrazone linkages. Aminoxy labeling involves two steps, the introduction of aldehyde groups into the glycoproteins by mild periodate oxidation, followed by treatment of the functionalized proteins with an aminoxy reagent. Aminoxy labeling of antibody glycosylation sites can be used as an alternative to succinimidyl ester labeling of amines for antibodies where amine labeling affects the antibody binding affinity. Aminoxy biotin has also been used to efficiently label cell-surface sialic acid-containing glycans on living animal cells.

## CF® Dye Aminoxy

| CF® Dye Aminoxy         | Ex/Em      | Size | Catalog No.           | Dye Features                     |
|-------------------------|------------|------|-----------------------|----------------------------------|
| <a href="#">CF@350</a>  | 347/448 nm | 1 mg | <a href="#">92050</a> | <a href="#">CF@350 Features</a>  |
| <a href="#">CF@405S</a> | 404/431 nm | 1 mg | <a href="#">92055</a> | <a href="#">CF@405S Features</a> |
| <a href="#">CF@405M</a> | 408/452 nm | 1 mg | <a href="#">92056</a> | <a href="#">CF@405M Features</a> |
| <a href="#">CF@488A</a> | 490/515 nm | 1 mg | <a href="#">92051</a> | <a href="#">CF@488A Features</a> |
| <a href="#">CF@568</a>  | 562/583 nm | 1 mg | <a href="#">92057</a> | <a href="#">CF@568 Features</a>  |
| <a href="#">CF@594</a>  | 593/614 nm | 1 mg | <a href="#">92052</a> | <a href="#">CF@594 Features</a>  |
| <a href="#">CF@633</a>  | 630/650 nm | 1 mg | <a href="#">92053</a> | <a href="#">CF@633 Features</a>  |
| <a href="#">CF@640R</a> | 642/662 nm | 1 mg | <a href="#">92058</a> | <a href="#">CF@640R Features</a> |
| <a href="#">CF@660R</a> | 663/682 nm | 1 mg | <a href="#">92059</a> | <a href="#">CF@660R Features</a> |
| <a href="#">CF@680R</a> | 680/701 nm | 1 mg | <a href="#">92054</a> | <a href="#">CF@680R Features</a> |

## References

1. Organic Letters (2017), 19, 3179-3182. [DOI:10.1021/acs.orglett.7b01198](https://doi.org/10.1021/acs.orglett.7b01198)

Download a list of [CF® dye references](#).

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