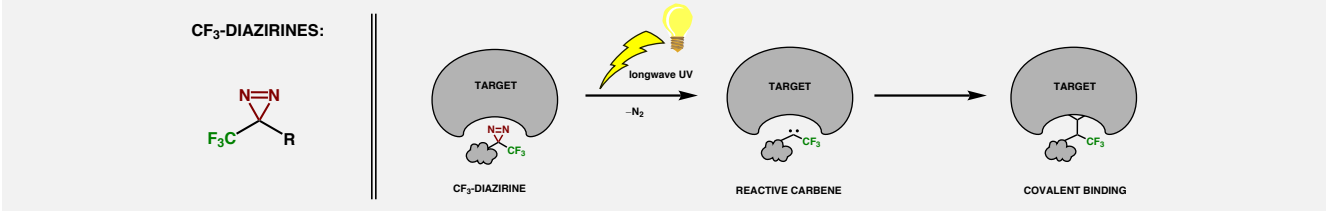
CF_3-Diazirines for photoaffinity labeling

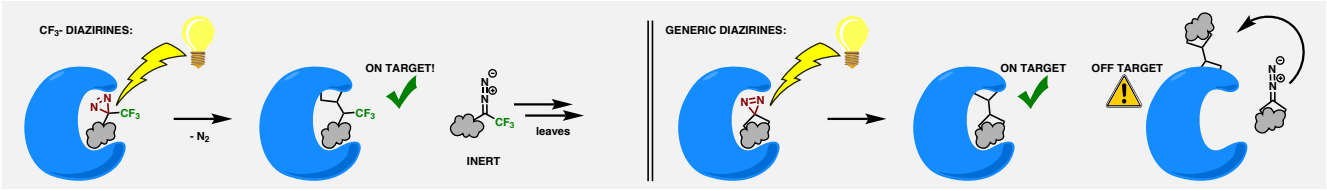
Introduction

Diazirines are the smallest molecules used in photochemical cross-linking and photoaffinity labeling approaches. Light radiation transfers them into highly reactive carbenes that attach to the molecular fragment in their immediate vicinity.[1] However, unwanted reactions may occur and scramble the labeling process,[2] unless… a CF_3-group comes to help! Our set of CF_3-diazirines has been developed to make derived probe molecules act at the time and place you shine light on them, not elsewhere.[3]

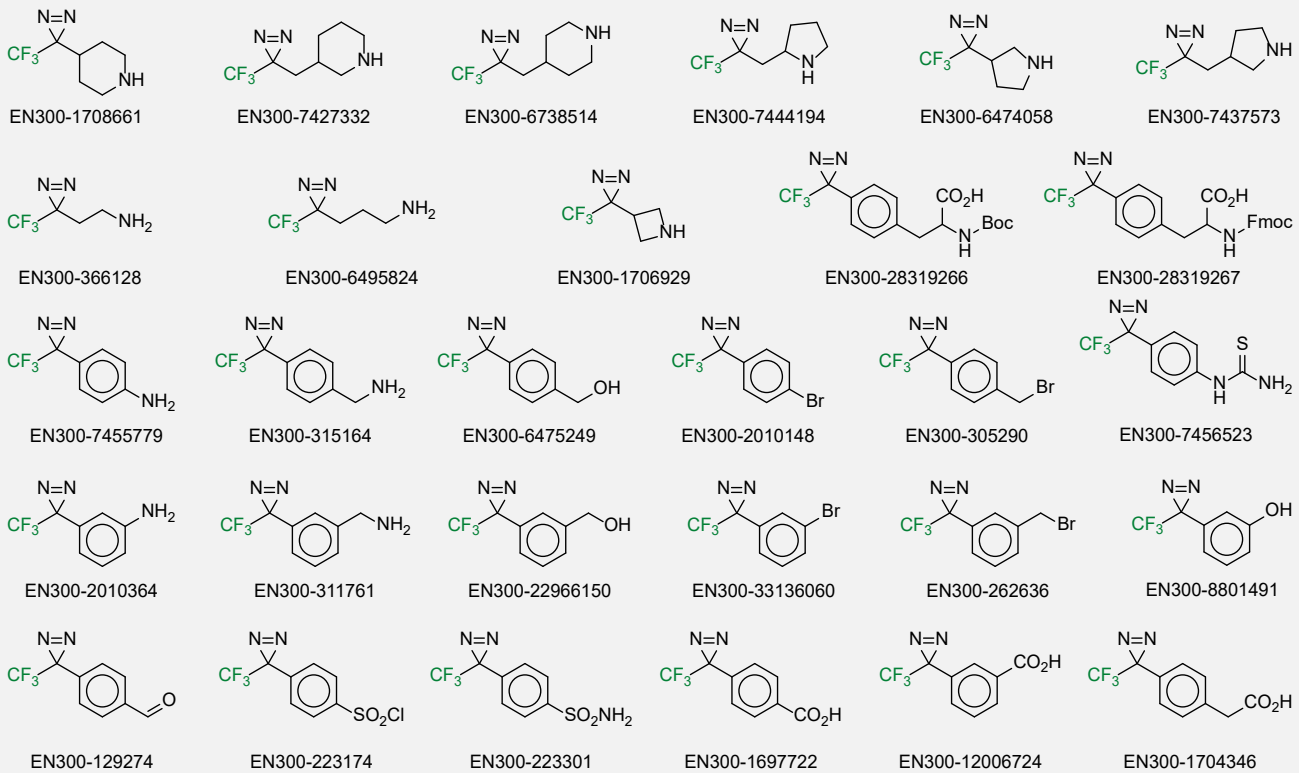


Key advantage

A common problem with diazirine photo-labeling is formation of diazo species that release carbenes with a time lag allowing diffusion away from the intended binding site and off-target binding. In 1980, *Brunner et al.* invented CF_3-diazirines to mitigate this mechanism.[4] The off-target mechanism is reduced due to the notoriously low reactivity of CF_3-diazo compounds.



We offer: more than 30 of CF_3-diazirines from stock on a 5-10 g scale.



References

1. L. Dubinsky et al. *Bioorg. Med. Chem.* **2012**, *2*, 554.
2. A. V. West et al. *J. Am. Chem. Soc.* **2021**, *143*, 6691.
3. Y. Kornii et al. *J. Org. Chem.* **2022**, *in press*.
4. J. Brunner et al. *J. Biol. Chem.* **1980**, *255*, 3313.