

Product Data Sheet

Product Name: ACE TFA

Cat. No.: GC82092

Chemical Properties

Cas. No.

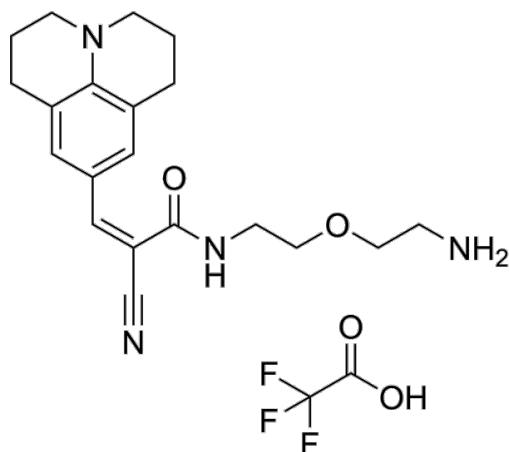
Formula $C_{22}H_{27}F_3N_4O_4$ M.Wt 468.47

Solubility DMSO: 100 mg/mL (213.46 mM; Need ultrasonic) Storage Store at -20°C, sealed storage, away from moisture and light

General tips For obtaining a higher solubility, please warm the tube at 37 °C and shake it in the ultrasonic bath for a while. Stock solution can be stored below -20°C for several months.

Shipping Condition Evaluation sample solution: ship with blue ice All other available size: ship with RT, or blue ice upon request.

Structure



Background

ACE TFA is a low-background, photostable fluorophore with nanomolar binding affinity for the Okra RNA aptamer. ACE TFA enables clear visualization of mRNA in live bacteria and mammalian cells, including tracking the trafficking of mRNA to stress granules and dual-color super-resolution imaging of RNA in live cells. (Ex=488 nm, Em=555 nm) [1].

In Vitro, ACE TFA (10 nM-10 μM; 3-10 min) forms a highly stable, bright green fluorescent complex with the Okra RNA aptamer, exhibiting nanomolar binding affinity, high quantum yield, low

Caution: Product has not been fully validated for medical applications. For research use only.

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magnesium dependence, potassium independence, and pH stability in vitro^[1]. ACE TFA (0.5-2 μ M; 10 min at 37°C, up to 1200 s) produces significantly brighter green fluorescence than reference fluorogenic ligands in live HEK293T cells, with exceptional photostability exceeding that of EGFP during long-term continuous imaging when bound to Okra^[1]. ACE TFA (0.5 μ M; 10 min at 37°C) enables real-time, long-term imaging of mRNA trafficking to and dynamics of stress granules in live HeLa cells when bound to Okra-tagged ACTB mRNA^[1]. ACE TFA (1 μ M; 10 min at 37°C) supports high-resolution live-cell SIM imaging of subcellular RNA localization, including detailed visualization of RNA distributions in stress granules when bound to the Okra RNA aptamer^[1].

References:

[1]. Zuo F, et al. Imaging the dynamics of messenger RNA with a bright and stable green fluorescent RNA[J]. Nature Chemical Biology, 2024: 1-10.

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