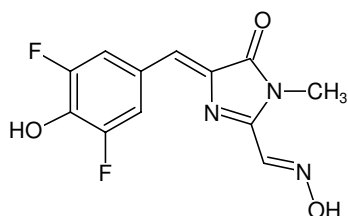


**DFHO**

Mimic of red fluorescent protein (RFP) fluorophore

4-(3,5-Difluoro-4-hydroxybenzylidene)-1-methyl-5-oxo-4,5-dihydro-1H-imidazole-2-carbaldehyde oxime

Cat. No.	Amount
RNT-003-1	1 mg
RNT-003-5	5 x 1 mg



Structural formula of DFHO

For in vitro use only!**Shipping:** shipped on blue ice**Storage Conditions:** store at -20 °C**Additional Storage Conditions:** store dark**Shelf Life:** 12 months after date of delivery**Molecular Formula:** C₁₂H₉F₂N₃O₃**Molecular Weight:** 281.22 g/mol**Exact Mass:** 281.06 g/mol**CAS#:** 1420815-34-4**Purity:** ≥ 98 % (HPLC)**Form:** solid**Color:** orange**Solubility:** DMSO**Description:**

DFHO is cell-permeable and can be used for *in vitro* and live cell detection of RNA provided with a DFHO-specific RNA sequence (DFHO aptamer) such as Corn.^[1-2] DFHO possesses a higher photostability than DFHBI and DFHBI-1T which generally results in a higher signal intensity and lower background in live cell imaging.

Fluorescence is activated upon binding to a matching aptamer sequence:

Corn/DFHO complex^[1],Exc._{max}: 505 nm / Em._{max}: 545 nm / ε_{max}: 29000 M⁻¹ cm⁻¹**Selected References:**

[1] Song *et al.* (2017) Imaging RNA polymerase III transcription using a photostable RNA-fluorophore complex. *Nat. Chem. Biol.* **13**(11):1187.

[2] Warner *et al.* (2017) A homodimer interface without base pairs in an RNA mimic of red fluorescent protein. *Nat. Chem. Biol.* **13**(11):1195.