

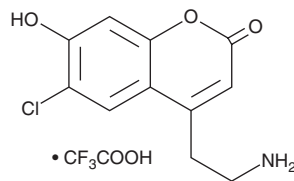
# PRODUCT INFORMATION



## FFN-102 (trifluoroacetate salt)

Item No. 21458

**CAS Registry No.:** 1234064-11-9  
**Formal Name:** 4-(2-aminoethyl)-6-chloro-7-hydroxy-2H-1-benzopyran-2-one 2,2,2-trifluoroacetate  
**MF:** C<sub>11</sub>H<sub>10</sub>ClNO<sub>3</sub> • CF<sub>3</sub>COOH  
**FW:** 353.7  
**Purity:** ≥98%  
**UV/Vis.:** λ<sub>max</sub>: 225, 331 nm  
**Supplied as:** A crystalline solid  
**Storage:** -20°C  
**Stability:** ≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

### Laboratory Procedures

FFN-102 (trifluoroacetate salt) is supplied as a crystalline solid. A stock solution may be made by dissolving the FFN-102 (trifluoroacetate salt) in the solvent of choice. FFN-102 (trifluoroacetate salt) is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of FFN-102 (trifluoroacetate salt) in these solvents is approximately 20 mg/ml.

### Description

FFN-102 is a fluorescent false neurotransmitter (FFN) that is a substrate for the dopamine transporter (DAT) and vesicular monoamine transporter 2 (VMAT2).<sup>1</sup> It is a pH-dependent fluorescent probe that labels dopamine cell bodies, axons, and presynaptic terminals. It can also be used to monitor dopamine exocytosis.<sup>2</sup> It has a pK<sub>a</sub> of 6.2 and displays pH-dependent excitation spectra of 340 and 370 nm at pH 5 and 7.4, respectively, which correspond to vesicular and cytoplasmic pH values.<sup>1</sup> The emission spectrum of FFN-102 is pH-independent at 453 nm, but the intensity of emission is pH-dependent with a higher intensity at a pH of 7.4. FFN-102 inhibits DAT (13.6% at a concentration of 10 μM) and the serotonin (5-HT) receptor subtype 5-HT<sub>2c</sub> (K<sub>i</sub> = ~3 μM) but does not bind to 37 other central nervous system receptors and transporters, including dopamine receptors, up to a concentration of 10 μM.<sup>1</sup>

### References

- Rodriguez, P.C., Pereira, D.B., Borgkvist, A., *et al.* Fluorescent dopamine tracer resolves individual dopaminergic synapses and their activity in the brain. *Proc. Natl. Acad. Sci. U.S.A.* **110**(3), 870-875 (2013).
- Liu, X., Savy, A., Maurin, S., *et al.* A dual functional electroactive and fluorescent probe for coupled measurements of vesicular exocytosis with high spatial and temporal resolution. *Angew. Chem. Int. Ed. Engl.* **56**(9), 2366-2370 (2017).

#### WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

#### SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

#### WARRANTY AND LIMITATION OF REMEDY

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