

# PRODUCT INFORMATION



## NFF-3

Item No. 22188

CAS Registry No.: 158584-09-9

Formal Name: N<sup>2</sup>-[2-(7-methoxy-2-oxo-2H-1-benzopyran-4-yl)acetyl]-L-arginyl-L-prolyl-L-lysyl-L-prolyl-L-valyl-L- $\alpha$ -glutamyl-L-norvalyl-L-tryptophyl-L-arginyl-N<sup>6</sup>-(2,4-dinitrophenyl)-L-lysineamide

MF: C<sub>78</sub>H<sub>110</sub>N<sub>22</sub>O<sub>20</sub>

FW: 1,675.8

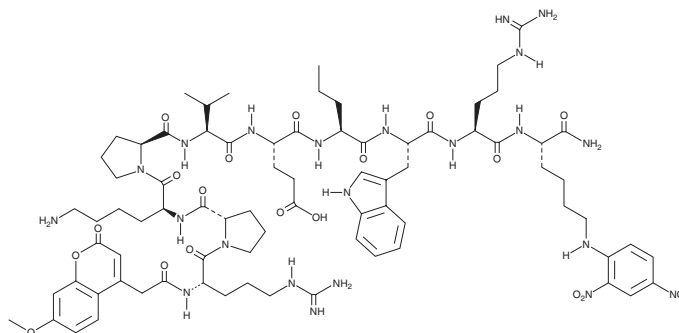
Purity:  $\geq 95\%$

UV/Vis.:  $\lambda_{\text{max}}$ : 219, 269, 291, 331 nm

Supplied as: A crystalline solid

Storage: -20°C

Stability:  $\geq 4$  years



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

### Laboratory Procedures

NFF-3 is supplied as a crystalline solid. A stock solution may be made by dissolving the NFF-3 in the solvent of choice, which should be purged with an inert gas. NFF-3 is soluble in organic solvents such as DMSO and dimethyl formamide. The solubility of NFF-3 in these solvents is approximately 30 and 25 mg/ml, respectively. NFF-3 is also slightly soluble in ethanol.

NFF-3 is sparingly soluble in aqueous buffers. For maximum solubility in aqueous buffers, NFF-3 should first be dissolved in DMSO and then diluted with the aqueous buffer of choice. NFF-3 has a solubility of approximately 0.25 mg/ml in a 1:3 solution of DMSO:PBS (pH 7.2) using this method. We do not recommend storing the aqueous solution for more than one day.

### Description

NFF-3 is a fluorogenic substrate of matrix metalloproteinases (MMPs).<sup>1</sup> NFF-3 is hydrolyzed rapidly by MMP-3 ( $k_{\text{cat}}/K_m = 218,000 \text{ s}^{-1}\text{M}^{-1}$ ) and slowly by MMP-9 ( $k_{\text{cat}}/K_m = 10,100 \text{ s}^{-1}\text{M}^{-1}$ ) with no significant hydrolysis by MMP-1 or MMP-2.<sup>1</sup> NFF-3 can be used to differentiate MMP-3 activity from that of other MMPs.<sup>1,2</sup>

### References

1. Giricz, O.L., Lauer, J.L., and Fields, G.B. Comparison of metalloproteinase protein and activity profiling. *Anal. Biochem.* **409**(1), 37-45 (2011).
2. Nagase, H.F., Fields, C.G., and Fields, G.B. Design and characterization of a fluorogenic substrate selectively hydrolyzed by stromelysin 1 (matrix metalloproteinase-3). *J. Biol. Chem.* **269**(33), 20952-20957 (1994).

#### 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.

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