MMP-3 fluorogenic substrate

Long emission wavelength reduces background

Highly-quenched, ultra-bright fluorogenic substrate for MMP-3 (other MMPs not tested, but likely). 5'-FAM fluorescence is thoroughly quenched by the TQ2W group until cleavage by MMP-3 separates the two moieties.

Ordering Information

Order Online »

BML-P278-0100	0.1mg

Manuals, SDS & CofA

View Online »

Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Avoid freeze/thaw cycles of solution. Protect from light and moisture.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Appearance	Lyophilized orange or red solid.
Application Notes	Useful for inhibitor screening, kinetic analysis, and cellular activity assay.
MW	2156.9
Purity	≥90% (HPLC)
Sequence	5′-FAM-Arg-Pro-Lys-Pro-Val-Glu-Nva-Trp-Arg-Lys(TQ2W)-NH_2
Solubility	Soluble in DMSO (5mM).

Technical Info / Product Notes

This substrate offers key advantages over other MMP-3 substrates.

1. Emission at the green end of the spectrum avoids the interference at lower wavelengths often exhibited by screening compounds, and by substances commonly found in biological samples and tissue culture medium.
2. MMP substrate peptides display poor aqueous solubility, often with K_ms near or above their limits of solubility, making enzyme and inhibitor kinetics difficult. MMP-3 K_m (~0.64µM) for this substrate is below its solubility limit (~2µM in assay buffer), allowing for substrate concentrations higher than the K_m, a condition generally desirable in endpoint assays.
3. In addition to the efficient binding as exhibited by low K_m, this substrate is avidly cleaved by MMP-3, with a k_{cat}/K_m of ~6.5 x $10^7 M^{-1} sec^{-1}$.
4. The high k_{cat}/K_m and the ultra-strong fluorescence of this substrate allow for substrate concentrations much lower than the K_m, a condition generally desirable in inhibitor screening/kinetics assays.

Last modified: May 29, 2024

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