

Mca-Lys-Pro-Leu-Gly-Leu-Dpa-Ala-Arg-NH₂ (fluorogenic substrate)

MMP substrate

Sensitive fluorogenic substrate for most matrix metalloproteinase (MMP) enzymes, as follows [k_{cat}/K_m ($\text{M}^{-1}\text{s}^{-1}$) and K_m (μM), in parentheses]: MMP-1 (9.2×10^4 , 27); MMP-2 (6.9×10^5 , >30); MMP-3 (2.0×10^4); MMP-7 (2.9×10^5); MMP-8 (4.2×10^5); MMP-9 (6.2×10^5 , >30); MMP-12 (1.3×10^5 , 130); MMP-13 (1.1×10^6 , 5.2); MMP-14 (1.3×10^6 , 7.9); mouse, rat, and monkey MMP-14; MMP-16; MMP-20; ADAM10 (1.1×10^3); ADAM17/TACE (7.8×10^5 , 26), and BACE2 (internal data using Prod. No. BML-SE550). It is cleaved very poorly by neutrophil elastase, and not at all by trypsin. Can be used to measure cell-associated activity, or activity in cell-conditioned medium, or in biological fluids such as synovial fluid. Mca fluorescence is quenched by the Dpa group until cleavage separates them (MMPs cleave between Gly-Leu). Ex.: 328nm, Em.: 400nm, but it is possible to use Ex./Em. 320-340/393-420nm. This highly-quenched (98.4%) substrate is useful for inhibitor screening and kinetic analysis.

Citations: 12

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Ordering Information

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BML-P276-0001

1mg

Manuals, SDS & CofA

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Handling & Storage

Use/Stability	As indicated on product label or CoA when stored as recommended.
Handling	Protect from light.
Long Term Storage	-20°C
Shipping	Blue Ice

Regulatory Status

RUO - Research Use Only

Product Details

Alternative Name	FS-6
Appearance	Lyophilized yellow solid.
CAS	720710-69-0
Formula	$C_{55}H_{80}N_{16}O_{16} \cdot CF_3CO_2H$
MW	1221.3 . 114.0
Purity	≥98% (HPLC)
Sequence	Mca-Lys-Pro-Leu-Gly-Leu-Dpa-Ala-Arg-NH ₂ ·TFA [Mca=(7-methoxycoumarin-4-yl)acetyl; Dpa=N-3-(2,4-dinitrophenyl)-L-α,β-diaminopropionyl]
Solubility	Soluble in water (10mg/ml).
Technical Info / Product Notes	Also available: OMNIMMP® fluorogenic control peptide Mca-Pro-Leu-OH (Prod. No. BML-P127).

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