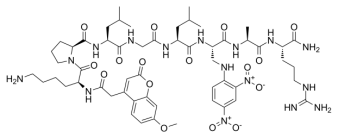
Mca-Lys-Pro-Leu-Gly-Leu-Dap(Dnp)-Ala-Arg-NH2



Cat. No.:	HY-P4931
CAS No.:	720710-69-0
Molecular Formula:	$C_{55}H_{80}N_{16}O_{16}$
Molecular Weight:	1221.32
Sequence:	{Mca}-Lys-Pro-Leu-Gly-Leu-{Dap(Dnp)}-Ala-Arg-NH2
Sequence Shortening:	{Mca}-KPLGL-{Dap(Dnp)}-AR-NH2
Target:	MMP
Pathway:	Metabolic Enzyme/Protease
Storage:	Sealed storage, away from moisture Powder -80°C 2 years -20°C 1 year * In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture)

SOLVENT & SOLUBILITY

In Vitro

DMSO : 100 mg/mL (81.88 mM; Need ultrasonic)

H_2O : 10 mg/mL (8.19 mM; Need ultrasonic)

Preparing Stock Solutions	Mass / Solvent / Concentration	1 mg	5 mg	10 mg
	1 mM	0.8188 mL	4.0939 mL	8.1879 mL
	5 mM	0.1638 mL	0.8188 mL	1.6376 mL
	10 mM	0.0819 mL	0.4094 mL	0.8188 mL

Please refer to the solubility information to select the appropriate solvent.

BIOLOGICAL ACTIVITY

Description

Mca-Lys-Pro-Leu-Gly-Leu-Dap(Dnp)-Ala-Arg-NH2 (FS-6) is a fluorescent peptide that is a quenched MMP peptide substrate. Mca-Lys-Pro-Leu-Gly-Leu-Dap(Dnp)-Ala-Arg-NH2 can be used for real-time quantification of MMP enzymatic activity. Mca-Lys-Pro-Leu-Gly-Leu-Dap(Dnp)-Ala-Arg-NH2 is an elongated peptide of MMP substrate (FS-1) and is active against collagenases (MMP-1, MMP-8, MMP-13) and MT1-MMP with higher specificity constants than FS-1[1]. (Ex/Em=325 nm/400 nm)

IC_{50} & Target				
	MMP-1 27.5 μM (Km)	MMP-8	MMP-13 5.2 μM (Km)	MMP-14 7.9 μM (Km)

In Vitro

Specificity of Mca-Lys-Pro-Leu-Gly-Leu-Dap(Dnp)-Ala-Arg-NH26 for collagenases (MMP-1, MMP-8, MMP-13) and MT1-MMP (MMP-14) The constant (kcat/Km) increases by a factor of 2-9, or 3 times than FS-1[1].

MCE has not independently confirmed the accuracy of these methods. They are for reference only.

REFERENCES

[1]. Neumann U, et al. Characterization of Mca-Lys-Pro-Leu-Gly-Leu-Dpa-Ala-Arg-NH2, a fluorogenic substrate with increased specificity constants for collagenases and tumor necrosis factor converting enzyme. Anal Biochem. 2004 May 15;328(2):166-73.

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