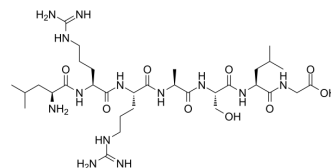


## Kemptide

Cat. No.:	HY-P0248
CAS No.:	65189-71-1
Molecular Formula:	C <sub>32</sub> H <sub>61</sub> N <sub>13</sub> O <sub>9</sub>
Molecular Weight:	771.91
Sequence:	Leu-Arg-Arg-Ala-Ser-Leu-Gly
Sequence Shortening:	LRRASLG
Target:	PKA
Pathway:	Stem Cell/Wnt
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	H <sub>2</sub> O : 50 mg/mL (64.77 mM; Need ultrasonic)				
		Solvent Concentration	Mass 1 mg	5 mg	10 mg
	Preparing Stock Solutions	1 mM	1.2955 mL	6.4774 mL	12.9549 mL
		5 mM	0.2591 mL	1.2955 mL	2.5910 mL
10 mM		0.1295 mL	0.6477 mL	1.2955 mL	
Please refer to the solubility information to select the appropriate solvent.					
In Vivo	1. Add each solvent one by one: PBS Solubility: 100 mg/mL (129.55 mM); Clear solution; Need ultrasonic				

### BIOLOGICAL ACTIVITY

Description	Kemptide is a synthetic heptapeptide that acts as a specific substrate for cAMP-dependent protein kinase (PKA).
In Vitro	Kemptide is a synthetic construct of a substrate for cAMP-dependent protein kinase (PK). Different types of intact cells catalyze the phosphorylation of Kemptide in the presence of extracellular ATP and cAMP with Km values of 3-4 μM for Kemptide <sup>[1]</sup> . Kemptide is a synthetic peptide substrate derived from pyruvate kinase <sup>[2]</sup> . MCE has not independently confirmed the accuracy of these methods. They are for reference only.

### PROTOCOL

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**Kinase Assay** <sup>[2]</sup>

PKA activity is measured in pools of 10 oocytes at various stages of maturation using the SignaTECT cAMP-Dependent Protein Kinase (PKA) Assay System. Measurements of basal PKA activity are performed in the absence of exogenous cAMP, whereas measurements of total (cAMP-stimulated) PKA activity are performed in reaction buffer containing 0.025 mM cAMP [2].

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

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**REFERENCES**

- [1]. Kübler D, et al. Evidence for ecto-protein kinase activity that phosphorylates Kemptide in a cyclic AMP-dependent mode. J Biol Chem. 1989 Aug 25;264(24):14549-55.
- [2]. Duncan FE, et al. Transducin-like enhancer of split-6 (TLE6) is a substrate of protein kinase A activity during mouse oocyte maturation. Biol Reprod. 2014 Mar 20;90(3):63.
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**Caution: Product has not been fully validated for medical applications. For research use only.**

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