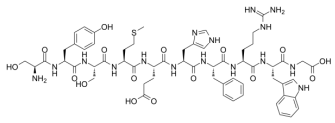
# Adrenocorticotropic Hormone (ACTH) (1-10), human



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| **Cat. No.:** | HY-P1518 |
| **CAS No.:** | 2791-05-1 |
| **Molecular Formula:** | $C_{59}H_{78}N_{16}O_{16}S$ |
| **Molecular Weight:** | 1299.41 |
| **Sequence:** | Ser-Tyr-Ser-Met-Glu-His-Phe-Arg-Trp-Gly |
| **Sequence Shortening:** | SYSMEHFRWG |
| **Target:** | Others |
| **Pathway:** | Others |
| **Storage:** | Sealed storage, away from moisture and light, under nitrogen<br>Powder -80°C 2 years<br>-20°C 1 year<br>* In solvent : -80°C, 6 months; -20°C, 1 month (sealed storage, away from moisture and light, under nitrogen) |

## SOLVENT & SOLUBILITY

**In Vitro**

DMSO : 250 mg/mL (192.40 mM; Need ultrasonic)
$H_2O$ : 1 mg/mL (0.77 mM; Need ultrasonic)

| Preparing Stock Solutions | Concentration / Solvent / Mass | 1 mg | 5 mg | 10 mg |
|---|---|---|---|---|
| | 1 mM | 0.7696 mL | 3.8479 mL | 7.6958 mL |
| | 5 mM | 0.1539 mL | 0.7696 mL | 1.5392 mL |
| | 10 mM | 0.0770 mL | 0.3848 mL | 0.7696 mL |

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

**In Vivo**

1. Add each solvent one by one: 10% DMSO >> 40% PEG300 >> 5% Tween-80 >> 45% saline
   Solubility: ≥ 2.08 mg/mL (1.60 mM); Clear solution
2. Add each solvent one by one: 10% DMSO >> 90% (20% SBE-β-CD in saline)
   Solubility: ≥ 2.08 mg/mL (1.60 mM); Clear solution
3. Add each solvent one by one: 10% DMSO >> 90% corn oil
   Solubility: ≥ 2.08 mg/mL (1.60 mM); Clear solution

## BIOLOGICAL ACTIVITY

**Description**

Adrenocorticotropic Hormone (ACTH) (1-10), human, an adrenocorticotropin hormone fragment, possesses a weak α-melanocyte stimulating hormone (α-MSH) potency only at high doses (100 and 1000 nM).

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| **In Vitro** | α-melanocyte stimulating hormone (MSH) induces the differentiation of mouse epidermal melanocytes in vivo and in vitro. Adrenocorticotropic hormone (ACTH) possesses the same amino acid sequence as MSH does[1].<br>MCE has not independently confirmed the accuracy of these methods. They are for reference only. |

## REFERENCES

[1]. Hirobe T, et al. ACTH(4-12) is the minimal message sequence required to induce the differentiation of mouse epidermal melanocytes in serum-free primary culture. J Exp Zool. 2000 May 1;286(6):632-40.



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