

## Synthetic AMP-activate Kinase Substrate Peptide

**Catalog No.** CSI13617                      **Quantity:** 1.0 mg

**Description:** The synthetic peptide HMRSAMSGHLHLVKRR can be used as a substrate for AMP activated protein kinase (AMPK) in *in vitro* kinase assays. It is phosphorylated by human AMPK in the presence of 200  $\mu$ M 5'-AMP with a Km of 36  $\mu$ M and a Vmax of 0.45 nmol/min/mg.

AMP-activated protein kinase (AMPK) is a sensor of cellular energy charge that regulates physiological processes that consume or regenerate ATP to restore the energy charge in the cell. Both catalytic subunit isoforms of AMPK (AMPK $\alpha$ 1 and AMPK $\alpha$ 2) are activated by ATP-depleting processes such as exercise and cellular stress, through a rise in cellular AMP that accompanies the fall of ATP levels due to the reaction catalysed by adenylate kinase.

AMPK is also activated by metformin, the drug most commonly employed for the treatment of type II diabetes.

**Molecular Weight:** 1779 g/mol

**Formulation:** Lyophilized.

**Purity:** 90 - 95% by HPLC.

**Amino Acid Sequence:** HMRSAMSGHLHLVKRR

**Reconstitution:** Reconstitute in ddH<sub>2</sub>O.

**Storage & Stability:** Store at -20°C for up to 1 year. **Avoid freeze/thaw cycles.**

**NOT FOR HUMAN USE. FOR RESEARCH ONLY. NOT FOR DIAGNOSTIC OR THERAPEUTIC USE.**