

***DLDVPIPGRFDRRVS(PO<sub>3</sub>)VAAE***  
***Serine/Threonine Phosphatase Substrate I***

Catalog Number: ES012

Lot Number: OKB12

***Specifications and Use***

<b>Sequence</b>	<ul style="list-style-type: none"><li>◆ Asp-Leu-Asp-Val-Pro-Ile-Pro-Gly-Arg-Phe-Asp-Arg-Arg-Val-Ser(PO<sub>3</sub>)-Val-Ala-Ala-Glu</li><li>◆ Synthetic phosphopeptide corresponding to amino acids 81 to 99 of Protein Kinase A Regulatory Subunit 2-<math>\alpha</math> (R11, Accession # P00515).</li></ul>
<b>Molecular Mass</b>	<ul style="list-style-type: none"><li>◆ 2192 Da</li></ul>
<b>Purity</b>	<ul style="list-style-type: none"><li>◆ 95%, based on HPLC analysis.</li></ul>
<b>Peptide Content</b>	<ul style="list-style-type: none"><li>◆ 78.86%</li></ul>
<b>Quantity</b>	<ul style="list-style-type: none"><li>◆ 1 mg</li></ul>
<b>Formulation</b>	<ul style="list-style-type: none"><li>◆ Lyophilized from a stock solution in distilled water.</li></ul>
<b>Reconstitution</b>	<ul style="list-style-type: none"><li>◆ Dissolves in water.</li><li>◆ 36.0 <math>\mu</math>L gives a stock solution of substrate at a 10 mM concentration.</li></ul>
<b>Shipping</b>	<ul style="list-style-type: none"><li>◆ The protein is shipped ambient. Upon receiving, store it immediately at the temperature recommended below.</li></ul>
<b>Storage</b>	<ul style="list-style-type: none"><li>◆ Lyophilized samples are stable for up to twelve months from date of receipt at -20° C to -70° C.</li><li>◆ Upon reconstitution, the substrate can be stored at 2° - 8° C for one month or at -20° to -70° C in a <b>manual defrost freezer</b> for three months.</li><li>◆ Protect from exposure to direct light.</li><li>◆ <b>Avoid repeated freeze-thaw cycles.</b></li></ul>

***Serine/Threonine Phosphatase Substrate I***

This phosphopeptide is a substrate for a variety of serine/threonine protein phosphatases (PPs), including PP1, PP2A, PP2B (calcineurin) and PP2C. Enzymatic cleavage of this substrate liberates inorganic phosphate, which can be measured in dye binding assays, such as the malachite green method.

**References:**

1. Pinna, L.A. and A. Donella-Deana (1994) *Biochim. Biophys. Acta* **1222**:415.
2. Donella-Deana, A. *et al.* (1994) *Eur. J. Biochem.* **219**:109.
3. McNall, S.J. and E.H. Fischer (1988) *J. Biol. Chem.* **263**:1893.
4. Fathi, A-R. *et al.* (2002) *Anal. Biochem.* **310**:208.
5. Van Veldhoven, P.P. and G.P. Mannaerts (1987) *Anal. Biochem.* **161**:45.