

PRODUCT INFORMATION



Akt (Phospho-Ser⁴⁷³)-biotin Peptide (trifluoroacetate salt)

Item No. 44665

Formal Name: N-(5-((3aS,4S,6aR)-2-oxohexahydro-1H-thieno[3,4-d]imidazol-4-yl)pentanoyl)-L-arginyl-L-arginyl-L-prolyl-L-histidyl-L-phenylalanyl-L-prolyl-L-glutamyl-L-phenylalanyl-O-phosphono-L-seryl-L-tyrosyl-L-seryl-L-alanyl-L-serylglycyl-L-threonyl-L-alanine, trifluoroacetate salt

Synonyms: Biotin-Akt (Phospho-Ser⁴⁷³) Peptide,
PKB (Phospho-Ser⁴⁷³)-biotin Peptide,
Protein Kinase B (Phospho-Ser⁴⁷³)-biotin Peptide,
RAC-PK (Phospho-Ser⁴⁷³)-biotin Peptide,
RAC Serine/threonine-protein Kinase (Phospho-Ser⁴⁷³)-biotin Peptide

Biotin—Arg—Arg—Pro—His—Phe—Pro—Gln—Phe—Ser(PO₃H₂)—Tyr—Ser—Ala—Ser—Gly—Thr—Ala—OH
• XCF₃COOH

Peptide Sequence: Biotin-RRPHFPQF-pS-YSASGTA-OH

MF: C₉₁H₁₃₂N₂₇O₂₈PS • XCF₃COOH

FW: 2,115.3

Purity: ≥95%

Supplied as: A solid

Storage: -20°C

Stability: ≥4 years

Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Akt (phospho-Ser⁴⁷³)-biotin peptide (trifluoroacetate salt) is supplied as a solid. A stock solution may be made by dissolving the Akt (phospho-Ser⁴⁷³)-biotin peptide (trifluoroacetate salt) in the solvent of choice, which should be purged with an inert gas. Akt (phospho-Ser⁴⁷³)-biotin peptide (trifluoroacetate salt) is soluble (≥10 mg/ml) in DMSO.

Further dilutions of the stock solution into aqueous buffers or isotonic saline should be made prior to performing biological experiments. Ensure that the residual amount of organic solvent is insignificant, since organic solvents may have physiological effects at low concentrations. Organic solvent-free aqueous solutions of Akt (phospho-Ser⁴⁷³)-biotin peptide (trifluoroacetate salt) can be prepared by directly dissolving the solid in aqueous buffers. Akt (phospho-Ser⁴⁷³)-biotin peptide (trifluoroacetate salt) is slightly soluble (0.1-1 mg/ml) in PBS (pH 7.2). We do not recommend storing the aqueous solution for more than one day.

Description

Akt (phospho-Ser⁴⁷³)-biotin peptide is a biotinylated peptide corresponding to amino acids 465 to 480 of Akt1. Akt, also known as protein kinase B (PKB), is a serine/threonine kinase belonging to the AGC kinase family and has three isoforms in mammals: Akt1, Akt2, and Akt3.^{1,2} Akt kinases function downstream of activated tyrosine kinases and PI3K to regulate a variety of cellular processes, including cell size, growth, proliferation, and survival, as well as genome stability, glucose metabolism, and neovascularization.² Akt is activated following phosphorylation at threonine 308, 309, and 305 and serine 473, 474, and 472 for Akt1, -2, and -3, respectively.³ This product can be used in the detection of antibodies targeting Akt (phospho-Ser⁴⁷³) in biological samples.

References

1. Dummler, B. and Hemmings, B.A. *Biochem. Soc. Trans.* **35(Pt 2)**, 231-235 (2007).
2. Bellacosa, A., Kumar, C.C., Di Cristofano, A., et al. *Adv. Cancer Res.* **94**, 29-86 (2005).
3. Santi, S.A. and Lee, H. *Am. J. Physiol. Cell Physiol.* **298(3)**, C580-C591 (2010).

WARNING

THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA

This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY

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