

# unphosphorylated SK1 (Ser-225) Peptide

Cat. # SX1625

Size 50 µg

## **Background:**

Sphingolipids are metabolized into bioactive products that include ceramide, sphingosine, and sphingosine-1-phosphate (S1P). Sphingosine Kinase (SK) catalyzes the phosphorylation of the lipid sphingosine, creating S1P. S1P subsequently signals through cell surface G protein-coupled receptors, as well as intracellularly, to modulate cell proliferation, survival, motility and differentiation. Two isoforms of SK have been identified, SK1 and SK2. The mRNA for both of these isoforms is widely expressed with SK1 expression highest in brain, heart, kidney, thymus, spleen and lung, while SK2 is highest in kidney and liver. SKs can be activated through growth factor, G protein-coupled, and immunoglobulin receptor signalling. SK1 has been shown to mediate cell growth, prevention of apoptosis, and cellular transformation, and is upregulated in a variety of human tumors. Regulation of SK1 may occur through ERK mediated phosphorylation of Ser-225. This phosphorylation leads to increased activity and translocation to the plasma membrane.

## **References**

- Melendez, A.J. et al. (2000) *Gene* 251(1) :19.  
Pitson, S.M. et al. (2003) *EMBOJ.* 22(20) :5491.  
Pitson, S.M. et al. (2005) *J Exp. Med.* 201(1) :49.

## **Peptide Sequence:**

Unphosphorylated SK1 (Ser-225) synthetic peptide corresponds to amino acids surrounding serine 225 in the central region of human SK1. The sequence has 4 amino acid differences from mouse and 5 from rat SK1, and is not homologous to sequences in SK2.

## **Applications:**

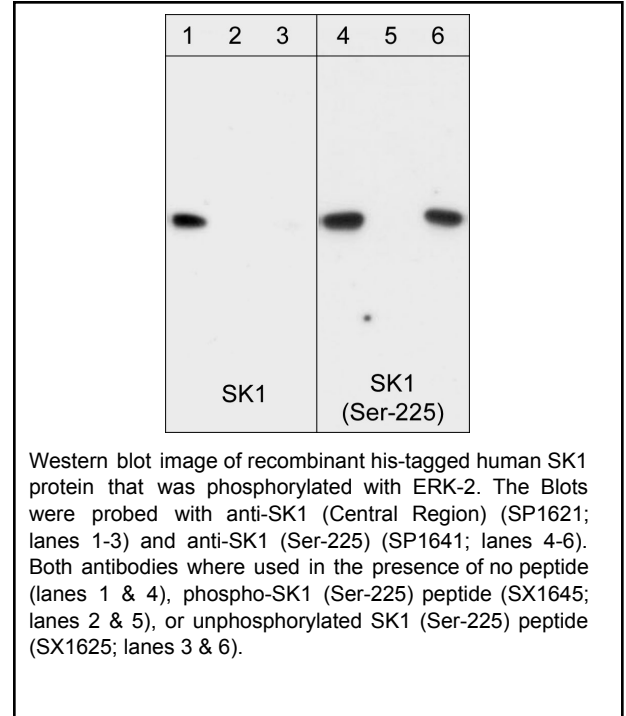
Blocking 1:1,000

ELISA 50 ng/well

End user should determine optimal concentration dependent on the concentration of the antibody. Recommended for blocking antibody reactivity in Western blot and immunocytochemistry. ELISA established in 96-well Nunc immunoplates where peptide was bound to plates for 2 hrs in 0.1 M sodium carbonate buffer, pH 8.5.

## **Related Products:**

- SP1641 Sphingosine Kinase 1 (Ser-225), phospho-specific Rabbit Polyclonal  
SX1645 phospho-SK1 (Ser-225) Peptide  
SP1621 Sphingosine Kinase 1 (Central Region) Rabbit Polyclonal



## **Buffer and Storage:**

Blocking Peptide is supplied in 50µl phosphate-buffered saline and 0.05% sodium azide.

Store at -20°C. Stable for 1 year.

## **Specificity:**

The peptide is specifically recognized by anti-SK1 (Central region) antibody (SP1621) in ELISA, and has been shown to block the reactivity of SP1621 during Western blot. In addition, the peptide is recommended for use in blocking SP1621 reactivity in immunocytochemistry.

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Rev 11/06