

Sphingosine Kinase Phospho-Regulation Antibody Sampler Kit

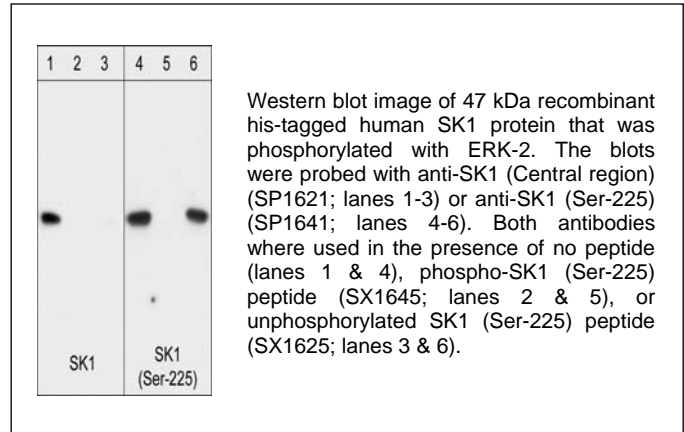
Catalog # **SK6010**

Kit Summary:

The sphingosine kinase (SK) phospho-regulation antibody sampler kit can be used to detect the level of phosphorylation of SK1 (Tyr-225) relative to the total expression level of SK1. The kit also includes peptides for antibody blocking experiments and a secondary reagent for antibody detection.

Background:

Sphingolipids are metabolized into bioactive products that include ceramide, sphingosine, and sphingosine-1-phosphate. SK catalyzes the phosphorylation of the lipid sphingosine, creating the bioactive lipid sphingosine-1-phosphate (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. SK can be activated through growth factor, G protein-coupled, and immunoglobulin receptor signaling. 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.



Background 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

Product References:

Tao, R. et al (2007) Cardiovas. Res. 74(1) :56 (SP1621: WB, mouse)

Kit Components:

Catalog#	Description	Type	Size	Applications	Species Reactivity	MW (kDa)
SP1621	Sphingosine Kinase 1 (Central region)	Rabbit pAb	50 µl	WB, E	H, M	47
SP1641	Sphingosine Kinase 1 (Ser-225), phospho-specific	Rabbit pAb	50 µl	WB, E	H	47
SX1625	Unphospho-Sphingosine Kinase 1 (Ser-225)	Peptide	50µg	AB, E		
SX1645	Phospho-Sphingosine Kinase 1 (Ser-225)	Peptide	50µg	AB, E		
RS3251	Anti-Rabbit Ig Light-Chain Specific:HRP	Mouse mAb	100 µl	WB, E		

Applications: WB = western blot, E = ELISA, AB = Antibody Blocking

Species: H = Human, R = Rat, M = Mouse, B = Bovine, C = Chicken, F = Fish

Buffers and Storage:

Rabbit polyclonal and mouse monoclonal, affinity-purified antibodies are each supplied in phosphate-buffered saline, 50% glycerol, 1 mg/ml BSA, and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

Blocking Peptides are supplied in phosphate-buffered saline and 0.05% sodium azide. Store at -20°C. Stable for 1 year.

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