

SPAK monoclonal antibody

Catalog: MB67238

Host: Mouse

Reactivity: Human

BackGround:

SPAK (STE20/SPS1-related Pro/Ala-rich kinase) and OSR1 (oxidative stress responsive 1) are members of the GCK family serine/threonine kinases. Overexpression and in vitro studies demonstrate that SPAK is able to activate p38 MAP kinase indicating a possible role for SPAK in the stress response. Yeast two-hybrid screening revealed that SPAK and OSR1 bind to Na-K-2Cl cotransporters NKCC1 and NKCC2 and K-Cl cotransporter KCC3. WNK1 and WNK4 phosphorylate SPAK at Thr243/247 and Ser380. Similarly, WNK1 and WNK4 phosphorylate OSR1 at Thr185 and Ser315. Phosphorylation at these sites stimulates SPAK and OSR1 activity, leading to NKCC1 phosphorylation and enhanced NKCC1 activity. SPAK is also phosphorylated at Ser311 by PKC θ in response to T cell activation. Substitution of Ser311 with Ala or specific siRNA knock-down of SPAK dramatically reduces TCR/CD28-induced AP-1 activation, suggesting SPAK is involved in T cell signaling as well.

Product:

Mouse IgG1. Supplied in crude ascites with 0.01% sodium azide.

Molecular Weight:

~ 65 kDa

Swiss-Prot:

Q9UEW8

Purification&Purity:

Applications:

WB (1/500 - 1/2000)

Storage&Stability:

Store at 4 °C short term. Aliquot and store at -20 °C long term. Avoid freeze-thaw cycles.

Specificity:

Recognizes endogenous levels of SPAK protein.

DATA:



Western blot analysis of SPAK expression in HepG2 (A) whole cell lysates.

Note:

For research use only, not for use in diagnostic procedure.

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