



#9555 Store at -20C

cdc25C Antibody Sampler Kit

1 Kit (3 x 20 microliters)

Orders: 877-616-CELL (2355)
orders@cellsignal.com

Support: 877-678-TECH (8324)

Web: info@cellsignal.com
cellsignal.com

3 Trask Lane | Danvers | Massachusetts | 01923 | USA

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Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
Phospho-cdc25C (Thr48) Antibody	9527	20 µl	75 kDa	Rabbit
Phospho-cdc25C (Ser216) (63F9) Rabbit mAb	4901	20 µl	60 kDa	Rabbit IgG
cdc25C (5H9) Rabbit mAb	4688	20 µl	60, 75 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat

Please visit cellsignal.com for individual component applications, species cross-reactivity, dilutions, protocols, and additional product information.

Description

The cdc25C Antibody Sampler Kit provides an economical means to investigate the entry of eukaryotic cells into mitosis. The kit contains enough primary and secondary antibodies to perform two Western blots with each antibody.

Storage

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.

Background

Cdc25 is a protein phosphatase responsible for dephosphorylating and activating cdc2, a crucial step in regulating the entry of all eukaryotic cells into mitosis (1). cdc25C is constitutively phosphorylated at Ser216 throughout interphase by c-TAK1, while phosphorylation at this site is DNA damage-dependent at the G2/M checkpoint (2). When phosphorylated at Ser216, cdc25C binds to members of the 14-3-3 family of proteins, sequestering cdc25C in the cytoplasm and thereby preventing premature mitosis (3). The checkpoint kinases Chk1 and Chk2 phosphorylate cdc25C at Ser216 in response to DNA damage (4,5).

Full activation of cdc25C involves phosphorylation at more than 12 different sites by cdc2/cyclin B and Polo-like kinase, and the activity of Pin1, a peptidyl-prolyl isomerase (PPI) (6,7). Pin1 contains a WW domain that binds phospho-Ser/Thr-Pro sites and a catalytic PPI region that induces a cis/trans isomerization on phospho-Ser/Thr-Pro bonds (8). Thr48 and Thr67 of cdc25C interact directly with the WW domain of Pin1 when these sites are phosphorylated (9). Thr48 phosphorylation also mediates binding to CKS/p13SUC1 (10).

Background References

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