Revision 2

Store at +4C

#7184

PathScan® Phospho-cdc2 (Thr161) Sandwich ELISA Kit

Cell Signaling TECHNOLOGY®

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

UniProt ID: #P06493 **Entrez-Gene Id:** #983

For Research Use Only. Not for Use in Diagnostic Procedures.

Product Includes	Product #	Quantity	Color	Storage Temp
TMB Substrate	7004	11 ml	Colorless	+4C
STOP Solution	7002	11 ml	Colorless	+4C
Sealing Tape	54503	2 ea		+4C
ELISA Wash Buffer (20X)	9801	25 ml	Colorless	+4C
Cell Lysis Buffer (10X)	9803	15 ml	Yellowish	-20C

Kit contents scale proportionally with size, except sealing tape.
Example: The V1 kit contains 5X the listed quantities above, but will exclude the sealing tape.

The microwell plate is supplied as 12 8-well modules - Each module is designed to break apart for 8 tests.

Description

CST's PathScan® Phospho-cdc2 (Thr161) Sandwich ELISA Kit is a solid phase sandwich enzyme-linked immunosorbent assay (ELISA) that detects endogenous levels of phospho-cdc2 (Thr161) protein. A Phospho-cdc2 (Thr161) Rabbit polyclonal Ab #9114* has been coated onto the microwells. After incubation with cell lysates, phospho-cdc2 (Thr161) protein is captured by the coated antibody. Following extensive washing, cdc2 Mouse mAb #2658* is added to detect the captured phospho-cdc2 protein. Anti-mouse IgG, HRP-linked Antibody #7076* is then used to recognize the bound detection antibody. HRP substrate, TMB, is added to develop color. The magnitude of optical density for this developed color is proportional to the quantity of phospho-cdc2 (Thr161) protein.
* Antibodies in kit are custom formulations specific to kit.

Specificity/Sensitivity

CST's PathScan® Phospho-cdc2 (Thr161) Sandwich ELISA Kit detects endogenous levels of phospho-cdc2 (Thr161). As shown in Figure 1, using the Phospho-cdc2 (Thr161) ELISA Kit #7184, a significant induction of phospho-cdc2 (Thr161) is detected in HeLa cells treated with Interleukin-4. This kit detects proteins from the indicated species, as determined through in-house testing, but may also detect homologous proteins from other species.

Background

The entry of eukaryotic cells into mitosis is regulated by cdc2 kinase activation, a process controlled at several steps including cyclin binding and phosphorylation of cdc2 at Thr161 (1). However, the critical regulatory step in activating cdc2 during progression into mitosis appears to be dephosphorylation of cdc2 at Thr14 and Tyr15 (2). Phosphorylation at Thr14 and Tyr15, resulting in inhibition of cdc2, can be carried out by Wee1 and Myt1 protein kinases (3,4). The cdc25 phosphatase may be responsible for removal of phosphates at Thr14 and Tyr15 and subsequent activation of cdc2 (1,5).

Background References

1. Atherton-Fessler, S. et al. (1994) *Mol Biol Cell* 5, 989-1001.
2. Norbury, C. et al. (1991) *EMBO J* 10, 3321-9.
3. McGowan, C.H. and Russell, P. (1993) *EMBO J* 12, 75-85.
4. Wells, N.J. et al. (1999) *J Cell Sci* 112 (Pt 19), 3361-71.
5. Hunter, T. (1995) *Cell* 80, 225-36.

Trademarks and Patents

Limited Uses

Products are labeled with For Research Use Only or a similar labeling statement and have not been approved, cleared, or licensed by the FDA or other regulatory foreign or domestic entity, for any purpose. Customer shall not use any Product for any diagnostic or therapeutic purpose, or otherwise in any manner that conflicts with its labeling statement. Products sold or licensed by CST are provided for Customer as the end-user and solely for research and development uses. Any use of Product for diagnostic, prophylactic or therapeutic purposes, or any purchase of Product for resale (alone or as a component) or other commercial purpose, requires a separate license from CST. Customer shall (a) not sell, license, loan, donate or otherwise transfer or make available any Product to any third party, whether alone or in combination with other materials, or use the Products to manufacture any commercial products, (b) not copy, modify, reverse engineer, decompile, disassemble or otherwise attempt to discover the underlying structure or technology of the Products, or use the Products for the purpose of developing any products or services that would compete with CST products or services, (c) not alter or remove from the Products any trademarks, trade names, logos, patent or copyright notices or markings, (d) use the Products solely in accordance with CST Product Terms of Sale and any applicable documentation, and (e) comply with any license, terms of service or similar agreement with respect to any third party products or services used by Customer in connection with the Products.

Revision 2

#7184

PathScan® Phospho-cdc2 (Thr161) Sandwich ELISA Kit