Revision 1

Store at -20C

#9328

c-Oncogene Antibody Sampler Kit

1 Kit (9 x 20 microliters)

Cell Signaling TECHNOLOGY®

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

Product Includes	Product #	Quantity	Mol. Wt	Isotype/Source
c-Fos Antibody	4384	20 µl	62 kDa	Rabbit
c-Abl Antibody	2862	20 µl	135 (c-Abl); 210 (Bcr-Abl) kDa	Rabbit
c-Jun (60A8) Rabbit mAb	9165	20 µl	43, 48 kDa	Rabbit IgG
c-Kit (D13A2) XP® Rabbit mAb	3074	20 µl	120 and 145 kDa	Rabbit IgG
c-Myc (D84C12) Rabbit mAb	5605	20 µl	57-65 kDa	Rabbit IgG
c-Raf Antibody	9422	20 µl	65 to 75 kDa	Rabbit
Ras (27H5) Rabbit mAb	3339	20 µl	21 kDa	Rabbit IgG
Src (32G6) Rabbit mAb	2123	20 µl	60 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µl		Goat
c-Rel (D4Y6M) Rabbit mAb	12707	20 µl	68-78 kDa	Rabbit IgG

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

Description

The c-Oncogene Antibody Sampler Kit provides an economical means of evaluating total levels of various oncogenic proteins. The kit contains enough primary and secondary antibodies to perform two Western blot experiments.

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

The regulation of cell growth, differentiation and programmed death is coordinated by several sets of proteins that comprise essential signal transduction pathways. Many of these key regulatory proteins are encoded by proto-oncogenes, which can be activated (altered) to change the typical cell program to one of abnormal cell growth and unregulated development. Proteins encoded by proto-oncogenes include growth factors and other ligands, receptor proteins, tyrosine kinases, various regulatory proteins (i.e. GTPases) and transcription factors. Together these proteins comprise the basic elements of cell signaling pathways; altered expression or mutation of one or more of these components can lead to oncogenic growth (reviewed in 1).

Non-receptor (i.e. cytoplasmic, nuclear) tyrosine kinases such as c-Abl and Src play key roles in the regulation of cell proliferation, differentiation, apoptosis, cell adhesion and stress responses (2,3). Alteration of the corresponding c-Abl and Src proto-oncogenes is associated with oncogenesis; Abl1-BCR gene translocations result in chronic myelogenous leukemia (CML) while constitutively active Src is seen in some patients with colon cancer and altered Src expression is seen in a wide array of cancers (2,4). Regulation of Raf tyrosine kinase by Ras GTPase controls downstream kinases in the MEK/MAPK signaling pathway (5). Activation of the Ras and Raf proto-oncogenes are common in human cancers and both proteins are seen as potential therapeutic targets (6). The receptor tyrosine kinase c-Kit plays a critical role in activation and growth of hematopoietic stem cells (7); mutations that inhibit c-Kit kinase activity are associated with a variety of developmental disorders while mutations producing constitutively active c-Kit can result in mastocytosis and gastrointestinal stromal tumors (8). The alteration of key transcription factors such as c-Fos, c-Jun, c-Myc and c-Rel that are normally responsible for regulating cell and tissue growth, differentiation and the inflammation/immune response, can also result in unregulated, oncogenic cell growth (9-12).

Background References

1. Croce, C.M. (2008) *N Engl J Med* 358, 502-11.
2. Wang, J.Y. (2000) *Oncogene* 19, 5643-50.
3. Thomas, S.M. and Brugge, J.S. (1997) *Annu Rev Cell Dev Biol* 13, 513-609.
4. Dehm, S.M. and Bonham, K. (2004) *Biochem Cell Biol* 82, 263-74.
5. Avruch, J. et al. (1994) *Trends Biochem Sci* 19, 279-83.
6. Stites, E.C. et al. (2007) *Science* 318, 463-7.
7. Gommerman, J.L. et al. (1997) *J Biol Chem* 272, 30519-25.
8. Nocka, K. et al. (1990) *EMBO J* 9, 1805-13.

9. Milde-Langosch, K. (2005) *Eur J Cancer* 41, 2449-61.
10. Shaulian, E. and Karin, M. (2002) *Nat Cell Biol* 4, E131-6.
11. Yokota, J. et al. (1986) *Science* 231, 261-5.
12. Rayet, B. and Gélinas, C. (1999) *Oncogene* 18, 6938-47.

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