

Crk II (m): 293T Lysate: sc-125171

BACKGROUND

The Crk family of adapter proteins including Crk II, Crk I, and Crk-L consist mostly of SH2 and SH3 domains. Through the interactions between SH2 domain and phosphotyrosine residues and/or between SH3 domain and proline-rich motifs, they are involved in a variety of signaling cascades. Crk I and Crk II are encoded by the same gene, which undergoes alternative splicing to yield these two proteins, but differ in their biological activities. Crk II has less transforming activity than Crk I, although both Crk I and Crk II bind to many tyrosine-phosphorylated proteins that bind to GRB2. In addition, Crk II becomes rapidly tyrosine-phosphorylated in response to stimulation with Insulin-like growth factor I (IGF-I) and might be involved in the IGF-I receptor signaling pathway. The gene encoding Crk I and II maps to human chromosome 17p13, a region which demonstrates frequent deletion or loss of heterozygosity in a wide range of human cancers.

REFERENCES

1. Mayer, B.J. and Hanafusa, H. 1990. Association of the v-Crk oncogene product with phosphotyrosine-containing proteins and protein kinase activity. *Proc. Natl. Acad. Sci. USA* 87: 2638-2642.
2. Matsuda, M., Mayer, B.J., Fukui, Y. and Hanafusa, H. 1990. Binding of transforming protein, P47gag-Crk, to a broad range of phosphotyrosine-containing proteins. *Science* 248: 1537-1539.
3. Mayer, B.J. and Hanafusa, H. 1990. Mutagenic analysis of the v-Crk oncogene: requirement for SH2 and SH3 domains, and correlation between increased cellular phosphotyrosine and transformation. *J. Virol.* 64: 3581-3589.
4. Matsuda, M., Tanaka, S., Nagata, S., Kojima, A., Kurata, T. and Shibuya, M. 1992. Two species of human CRK cDNA encode proteins with distinct biological activities. *Mol. Cell. Biol.* 12: 3482-3489.
5. Matsuda, M., Reichman, C.T. and Hanafusa, H. 1992. Biological and biochemical activity of v-Crk chimeras containing the SH2/SH3 regions of phosphatidylinositol-specific phospholipase C- γ and Src. *J. Virol.* 66: 115-121.
6. Tanaka, S., Hattori, S., Kurata, T., Nagashima, K., Fukui, Y., Nakamura, S. and Matsuda, M. 1993. Both the SH2 and SH3 domains of human Crk protein are required for neuronal differentiation of PC12 cells. *Mol. Cell. Biol.* 13: 4409-4415.
7. Birge, R.B., Fajardo, J.E., Reichman, C., Shoelson, S.E., Songyang, Z., Cantley, L.C. and Hanafusa, H. 1993. Identification and characterization of a high-affinity interaction between v-Crk and tyrosine-phosphorylated paxillin in CT10-transformed fibroblasts. *Mol. Cell. Biol.* 13: 4648-4656.

STORAGE

Store at 4° C, ****DO NOT FREEZE****. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

PROTOCOLS

See our web site at www.scbt.com for detailed protocols and support products.

CHROMOSOMAL LOCATION

Genetic locus: CRK (human) mapping to 17p13.3.

PRODUCT

Crk II (m): 293T Lysate represents a lysate of mouse Crk II transfected 293T cells and is provided as 100 μ g protein in 200 μ l SDS-PAGE buffer.

APPLICATIONS

Crk II (m): 293T Lysate is suitable as a Western Blotting positive control for mouse reactive Crk II antibodies. Recommended use: 10-20 μ l per lane.

Control 293T Lysate: sc-117752 is available as a Western Blotting negative control lysate derived from non-transfected 293T cells.

RESEARCH USE

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