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Product Information

Anti-Crk-II
produced in rabbit, IgG fraction of antiserum

Catalog Number **C0853**

Product Description

Anti-Crk-II is produced in rabbit using as immunogen a synthetic peptide K-THVRLLDQQNPDEDFS corresponding to the C-terminal of human Crk-II (amino acids 289-304 with N-terminally added lysine), conjugated to KLH. This sequence is identical to the corresponding mouse and chicken Crk-II sequences, and highly conserved (single amino acid substitution) in rat Crk-II. This sequence is absent in Crk-I isoform and has limited homology (60%) to Crk-L. Whole antiserum is purified to provide an IgG fraction of antiserum

Anti-Crk-II recognizes human and chicken Crk-II (38 kDa). Applications include the detection and localization of Crk-II by immunoblotting. Staining of Crk-II in immunoblotting is specifically inhibited with Crk-II immunizing peptide.

Crk proteins are members of a family of adaptor proteins involved in signal transduction, including Grb2 and Nck, which consist mostly of Src homology 2 and 3 (SH2 and SH3) domains. Crk was originally isolated as a transforming component of the avian sarcoma virus CT10 encoding the oncogene product v-Crk.[1,2,3] The cellular homologs of v-Crk, include Crk-I, Crk-II and CrkL. Crk-I and Crk-II are produced by the same *crk* gene by alternative splicing.[4] The major Crk transforming activity appears to be associated with Crk-I. The Crk-II protein (also termed p38, 40/42 kDa, calculated MW 34 kDa), has an N-terminal SH2 domain and two SH3 domains. The Crk-I protein (28 kDa) lacks the C-terminal SH3 domain. The CrkL protein (39 kDa) is similar to Crk-II (60% homology), but is encoded by a different gene. The Crk proteins function as adaptor molecules in several tyrosine kinase signal transduction pathways.[5] The SH2 domain of Crk interacts with tyrosine phosphorylated proteins, such as EGF receptor, p130^{Cas} and Cbl, Shc and paxillin, in response to a number of cellular stimuli such as growth factor stimulation, T-cell receptor activation and integrin-mediated cell adhesion.[4-8] Cellular targets for the SH3 domain of Crk include Sos, C3G, c-Abl, DOCK180 and EPS15.[4,9-11] Sos and C3G proteins are efficiently recruited by Crk to the p130^{Cas}-Crk signaling complex upon cellular activation. Both the SH2 and SH3 domains of the human Crk protein are required for neuronal differentiation of PC12 cells, suggesting that Crk plays a role in NGF-signaling involving activation of the p21^{ras} signaling pathway.[12]

Reagents

Supplied as a solution in 0.01 M phosphate buffered saline, pH 7.4, containing 15 mM sodium azide.

Precautions and Disclaimer

This product is for R&D use only, not for drug, household, or other uses. Please consult the Material Safety Data Sheet for information regarding hazards and safe handling practices.

Storage/Stability

Store at −20 °C. For continuous use, the product may be stored at 2-8 °C for up to one month. For extended storage, freeze in working aliquots at -20 °C. Repeated freezing and thawing, or storage in "frost-free" freezers, is not recommended. If slight turbidity occurs upon prolonged storage, clarify the solution by centrifugation before use. Working dilution samples should be discarded if not used within 12 hours.

Product Profile

Immunoblotting: a minimum working dilution of 1:5,000 is determined using a whole extract of chicken fibroblasts.

Immunoblotting: a minimum working dilution of 1:3,000 is determined using a whole extract of the Burkitt lymphoma Raji cell line.

Note: In order to obtain the best results and assay sensitivity in various techniques and preparations, we recommend determining optimal working dilutions by titration.

References

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