

CRIF1 (A-12): sc-103443



The Power to Question

BACKGROUND

CRIF1, also known as GADD45GIP1, PLINP1, PRG6 or CKBBP2, is a 222 amino acid nuclear protein that plays a role in apoptosis control. Expressed in a variety of tissues, including heart, thyroid, trachea, kidney, ovary, pancreas, testis and stomach, CRIF1 functions as a negative regulator of G₁ to S phase cell cycle production, specifically by working with GADD 45 proteins to inhibit the activity of cyclin-dependent kinases (Cdks). While overexpression of CRIF1 results in cell cycle arrest at the G₁ phase, downregulation of CRIF1 by p53 in apoptotic cells promotes cell cycle progression and may be an important factor in tumor growth and metastasis. CRIF1 is subject to phosphorylation by casein kinase II, an event that is thought to decrease CRIF1 activity and promote cellular proliferation. Human CRIF1 shares 90% homology with its mouse counterpart, suggesting a conserved role between species.

REFERENCES

1. Horikoshi, N., Cong, J., Kley, N. and Shenk T. 1999. Isolation of differentially expressed cDNAs from p53-dependent apoptotic cells: activation of the human homologue of the *Drosophila* peroxidase gene. *Biochem. Biophys. Res. Commun.* 261: 864-869.
2. Chung, H.K., Yi, Y.W., Jung, N.C., Kim, D., Suh, J.M., Kim, H., Park, K.C., Song, J.H., Kim, D.W., Hwang, E.S., Yoon, S.H., Bae, Y.S., Kim, J.M., Bae, I. and Shong, M. 2003. CR6-interacting factor 1 interacts with GADD 45 family proteins and modulates the cell cycle. *J. Biol. Chem.* 278: 28079-28088.
3. Park, K.C., Song, K.H., Chung, H.K., Kim, H., Kim, D.W., Song, J.H., Hwang, E.S., Jung, H.S., Park, S.H., Bae, I., Lee, I.K., Choi, H.S. and Shong, M. 2005. CR6-interacting factor 1 interacts with orphan nuclear receptor Nur77 and inhibits its transactivation. *Mol. Endocrinol.* 19: 12-24.
4. Nakayama, K., Nakayama, N., Wang, T.L. and Shih, I.e.M. 2007. NAC-1 controls cell growth and survival by repressing transcription of GADD45GIP1, a candidate tumor suppressor. *Cancer Res.* 67: 8058-8064.
5. Oh, N.S., Yoon, S.H., Lee, W.K., Choi, J.Y., Min do, S. and Bae, Y.S. 2007. Phosphorylation of CKBBP2/CRIF1 by protein kinase CKII promotes cell proliferation. *Gene* 386: 147-153.
6. Suh, J.H., Shong, M., Choi, H.S. and Lee, K. 2008. CR6-interacting factor 1 represses the transactivation of androgen receptor by direct interaction. *Mol. Endocrinol.* 22: 33-46.

CHROMOSOMAL LOCATION

Genetic locus: GADD45GIP1 (human) mapping to 19p13.2; Gadd45gip1 (mouse) mapping to 8 C3.

SOURCE

CRIF1 (A-12) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of CRIF1 of human origin.

STORAGE

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

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-103443 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

CRIF1 (A-12) is recommended for detection of CRIF1 of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

CRIF1 (A-12) is also recommended for detection of CRIF1 in additional species, including canine, bovine and porcine.

Suitable for use as control antibody for CRIF1 siRNA (h): sc-97804, CRIF1 siRNA (m): sc-105245, CRIF1 shRNA Plasmid (h): sc-97804-SH, CRIF1 shRNA Plasmid (m): sc-105245-SH, CRIF1 shRNA (h) Lentiviral Particles: sc-97804-V and CRIF1 shRNA (m) Lentiviral Particles: sc-105245-V.

Molecular Weight of CRIF1: 28 kDa.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use donkey anti-goat IgG-HRP: sc-2020 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible donkey anti-goat IgG-HRP: sc-2033 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048. 2) Immunofluorescence: use donkey anti-goat IgG-FITC: sc-2024 (dilution range: 1:100-1:400) or donkey anti-goat IgG-TR: sc-2783 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

RESEARCH USE

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

PROTOCOLS

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



Try **CRIF1 (H-9): sc-374122**, our highly recommended monoclonal alternative to CRIF1 (A-12).