

CRIF1 (M-222): sc-134882

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

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- Online Mendelian Inheritance in Man, OMIM™. 2002. Johns Hopkins University, Baltimore, MD. MIM Number: 605162. World Wide Web URL: <http://www.ncbi.nlm.nih.gov/omim/>
- Chung, H.K., et al. 2003. CR6-interacting factor 1 interacts with Gadd45 family proteins and modulates the cell cycle. *J. Biol. Chem.* 278: 28079-28088.
- Park, K.C., et al. 2005. CR6-interacting factor 1 interacts with orphan nuclear receptor Nur77 and inhibits its transactivation. *Mol. Endocrinol.* 19: 12-24.
- Nakayama, K., et al. 2007. NAC-1 controls cell growth and survival by repressing transcription of Gadd45GIP1, a candidate tumor suppressor. *Cancer Res.* 67: 8058-8064.
- Oh, N.S., et al. 2007. Phosphorylation of CKBBP2/CRIF1 by protein kinase CKII promotes cell proliferation. *Gene* 386: 147-153.

CHROMOSOMAL LOCATION

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

SOURCE

CRIF1 (M-222) is a rabbit polyclonal antibody raised against amino acids 1-222 representing full length CRIF1 of mouse origin.

PRODUCT

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

STORAGE

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

APPLICATIONS

CRIF1 (M-222) is recommended for detection of CRIF1 of mouse, rat and, to a lesser extent, human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], 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).

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.

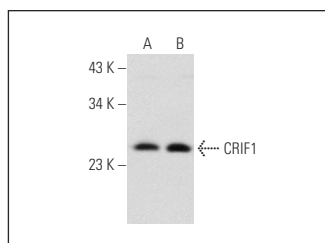
Molecular Weight of CRIF1: 28 kDa.

Positive Controls: mouse brain extract: sc-2253 or F9 cell lysate: sc-2245.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-rabbit IgG-HRP: sc-2004 (dilution range: 1:2000-1:100,000) or Cruz Marker™ compatible goat anti-rabbit IgG-HRP: sc-2030 (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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use goat anti-rabbit IgG-FITC: sc-2012 (dilution range: 1:100-1:400) or goat anti-rabbit IgG-TR: sc-2780 (dilution range: 1:100-1:400) with UltraCruz™ Mounting Medium: sc-24941.

DATA



CRIF1 (M-222): sc-134882. Western blot analysis of CRIF1 expression in mouse heart tissue extract (A) and F9 whole cell lysate (B).

RESEARCH USE

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



Try **CRIF1 (H-9): sc-374122**, our highly recommended monoclonal alternative to CRIF1 (M-222).