

# BTG1 (D-20): sc-18541

## BACKGROUND

B cell translocation gene proteins, also designated BTG-1-4, are members of a novel antiproliferative gene family and play a role in transcription regulation. BTG genes are considered immediate early genes whose expression is induced in response to mitogenic as well as differentiative and antiproliferative factors. Expression of BTG1 is maximal in the G<sub>0</sub>/G<sub>1</sub> phases of the cell cycle and is downregulated when cells progress through G<sub>1</sub>. BTG2 is a p53 inducible, antiproliferative protein that regulates the G<sub>1</sub>/S transition of the cell cycle. BTG2 expression increases in response to DNA damage, cell differentiation, cell quiescence, cell contact and as part of a positive feedback mechanism in response to growth stimulation. High levels of BTG2 are present in kidney proximal tubules, lung alveolar bronchial epithelium, and the basal cell layer of prostate acini. BTG1 and BTG2 both contain LXXLL motifs, referred to as nuclear receptor boxes, which are involved in the regulation of ER-mediated activation. Human BTG3 protein is abundantly expressed in testis, prostate, ovary, thymus and lung.

## REFERENCES

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- Prevot, D., et al. 2001. Relationships of the antiproliferative proteins BTG1 and BTG2 with CAF1, the human homolog of a component of the yeast CCR4 transcriptional complex: involvement in ER $\alpha$  signaling pathway. *J. Biol. Chem.* 276: 9640-9648.
- Tirone, F. 2001. The gene PC3(TIS21/BTG2), prototype member of the PC3/BTG/TOB family: regulator in control of cell growth, differentiation, and DNA repair? *J. Cell. Physiol.* 2: 155-165.
- Melamed, J., et al. 2002. Expression of BTG2 protein in normal human tissues. *Tissue Cell* 1: 28-32.
- Duriez, C., et al. 2002. The human BTG2/TIS21/PC3 gene: genomic structure, transcriptional regulation and evaluation as a candidate tumor suppressor gene. *Gene* 1-2: 207-214.
- Morel, A.P., et al. 2003. BTG2 antiproliferative protein interacts with the human CCR4 complex existing *in vivo* in three cell-cycle-regulated forms. *J. Cell. Sci.* 116: 2929-2936.
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## CHROMOSOMAL LOCATION

Genetic locus: BTG1 (human) mapping to 12q21.33; Btg1 (mouse) mapping to 10 C3.

## SOURCE

BTG1 (D-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of BTG1 of human origin.

## PRODUCT

Each vial contains 200  $\mu$ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Blocking peptide available for competition studies, sc-18541 P, (100  $\mu$ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

## APPLICATIONS

BTG1 (D-20) is recommended for detection of BTG1 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).

BTG1 (D-20) is also recommended for detection of BTG1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for BTG1 siRNA (h): sc-43644, BTG1 siRNA (m): sc-45961, BTG1 shRNA Plasmid (h): sc-43644-SH, BTG1 shRNA Plasmid (m): sc-45961-SH, BTG1 shRNA (h) Lentiviral Particles: sc-43644-V and BTG1 shRNA (m) Lentiviral Particles: sc-45961-V.

Molecular Weight of BTG1: 19 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.

## STORAGE

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

## RESEARCH USE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) or our catalog for detailed protocols and support products.