

# G3BP1 (H-94): sc-98561

## BACKGROUND

G3BP1 (GTPase activating protein (SH3 domain) binding protein 1), also known as G3BP or HDH-VIII, is a ubiquitously expressed protein that localizes to the cytoplasm in proliferating cells and to the nucleus in non-proliferating cells. One of several DNA-unwinding enzymes, G3BP1 functions as a sequence-specific, phosphorylation-dependent helicase that unwinds partial RNA and DNA duplexes containing hanging 3' or 5' ends. G3BP1 uses magnesium as a cofactor and, in addition to its helicase activity, acts as an endoribonuclease that cleaves mRNA between adenine and cytosine residues at the 3'-UTR. An element of the Ras signaling pathway, G3BP1 binds to the SH3 domain of Ras GTPase-activating protein (Ras GAP) in proliferating cells, thereby regulating Ras signaling events in developing tissues. Due to its involvement in both DNA replication and signaling pathways within the cell, G3BP1 expression is implicated in the pathogenesis of several cancers, including esophageal squamous carcinoma.

## CHROMOSOMAL LOCATION

Genetic locus: G3BP1 (human) mapping to 5q33.1; G3bp1 (mouse) mapping to 11 B1.3.

## SOURCE

G3BP1 (H-94) is a rabbit polyclonal antibody raised against amino acids 158-251 mapping within an internal region of G3BP1 of human 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

G3BP1 (H-94) is recommended for detection of G3BP1 of mouse, rat and 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), immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

G3BP1 (H-94) is also recommended for detection of G3BP1 in additional species, including equine, canine, bovine and porcine.

Suitable for use as control antibody for G3BP1 siRNA (h): sc-75076, G3BP1 siRNA (m): sc-75077, G3BP1 shRNA Plasmid (h): sc-75076-SH, G3BP1 shRNA Plasmid (m): sc-75077-SH, G3BP1 shRNA (h) Lentiviral Particles: sc-75076-V and G3BP1 shRNA (m) Lentiviral Particles: sc-75077-V.

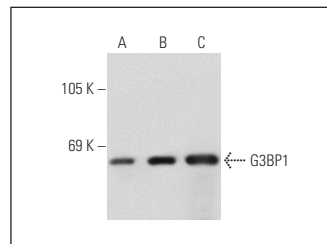
Molecular Weight of G3BP1: 68 kDa.

Positive Controls: G3BP1 (h2): 293 Lysate: sc-174777, A-431 whole cell lysate: sc-2201 or Jurkat whole cell lysate: sc-2204.

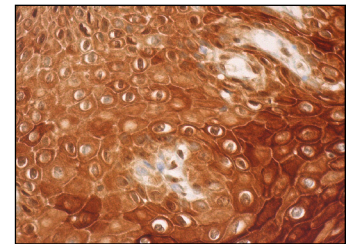
## RECOMMENDED SECONDARY REAGENTS

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. 4) Immunohistochemistry: use ImmunoCruz™: sc-2051 or ABC: sc-2018 rabbit IgG Staining Systems.

## DATA



G3BP1 (H-94): sc-98561. Western blot analysis of G3BP1 expression in non-transfected 293: sc-110760 (A), human G3BP1 transfected 293: sc-174777 (B) and A-431 (C) whole cell lysates.



G3BP1 (H-94): sc-98561. Immunoperoxidase staining of formalin fixed, paraffin-embedded uterine cervix tissue showing cytoplasmic and nuclear staining of squamous epithelial cells.

## SELECT PRODUCT CITATIONS

- Shi, J., et al. 2013. Cleavage of sequestosome 1/p62 by an enteroviral protease results in disrupted selective autophagy and impaired NFκB signaling. *Autophagy* 9: 1591-1603.

## 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.



Try **G3BP1 (H-10): sc-365338** or **G3BP1 (TT-Y): sc-81940**, our highly recommended monoclonal alternatives to G3BP1 (H-94). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **G3BP1 (H-10): sc-365338**.