

G3BP1 (H-24): sc-133599

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.

REFERENCES

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CHROMOSOMAL LOCATION

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

RESEARCH USE

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

SOURCE

G3BP1 (H-24) is a Protein A purified rabbit polyclonal antibody raised against synthetic G3BP1 peptide of human origin.

PRODUCT

Each vial contains 100 μ g IgG in 1.0 ml PBS with < 0.1% sodium azide, 0.1% gelatin and <0.02% sucrose.

APPLICATIONS

G3BP1 (H-24) is recommended for detection of G3BP1 of mouse and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g of total protein (1 ml of cell lysate)] and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

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.

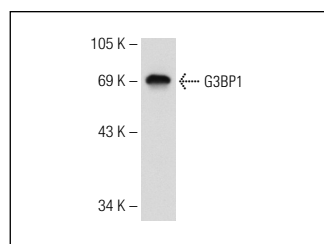
Molecular Weight of G3BP1: 68 kDa.

Positive Controls: A-431 whole cell lysate: sc-2201 or 293T whole cell lysate.

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).

DATA



G3BP1 (H-24): sc-133599. Western blot analysis of G3BP1 expression in 293T whole cell lysate.

STORAGE

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