

G2A (H-70): sc-50309

BACKGROUND

G2A (for G2 accumulation) is a seven-transmembrane G protein-coupled receptor that is upregulated in response to DNA damage and stress. G2A is predominantly expressed in hematopoietic tissues and in hematopoietic stem cells and it is more highly detected in pro-B cells, while lower expression is observed in immature B cells and pre-B cells. G2A is expressed throughout T-cell maturation, and it is further increased in response to T-cell activation. Ectopic expression of a G2A fusion protein in NIH/3T3 fibroblasts induces a cell cycle arrest that is consistent with a block at the G₂/M transition. G2A is also able to attenuate the proliferative effects of BCR-ABL, a chimeric tyrosine kinase oncogene, suggesting that G2A possesses anti-oncogenic properties. The amino acid sequence of G2A contains a destruction box motif that is consistently observed in cyclins, where it is required for ubiquitination and proteolytic degradation.

REFERENCES

1. Bedi, A., et al. 1995. BCR-ABL-mediated inhibition of apoptosis with delay of G₂/M transition after DNA damage: a mechanism of resistance to multiple anticancer agents. *Blood* 86:1148-1158.
2. Allday, M.J., et al. 1995. DNA damage in human B cells can induce apoptosis, proceeding from G₁/S when p53 is transactivation competent and G₂/M when it is transactivation defective. *EMBO J.* 14: 4994-5005.

CHROMOSOMAL LOCATION

Genetic locus: GPR132 (human) mapping to 14q32.33; Gpr132 (mouse) mapping to 12 F2.

SOURCE

G2A (H-70) is a rabbit polyclonal antibody raised against amino acids 311-380 mapping within a C-terminal cytoplasmic domain of G2A 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.

APPLICATIONS

G2A (H-70) is recommended for detection of G2A of human, and, to a lesser extent, mouse and rat 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).

Suitable for use as control antibody for G2A siRNA (h): sc-43776, G2A siRNA (m): sc-44371, G2A shRNA Plasmid (h): sc-43776-SH, G2A shRNA Plasmid (m): sc-44371-SH, G2A shRNA (h) Lentiviral Particles: sc-43776-V and G2A shRNA (m) Lentiviral Particles: sc-44371-V.

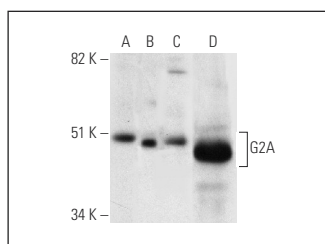
Molecular Weight of G2A: 42-46 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203, THP-1 cell lysate: sc-2238 or human skeletal muscle extract: sc-363776.

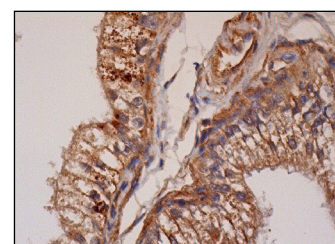
RECOMMENDED SECONDARY REAGENTS

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



G2A (H-70): sc-50309. Western blot analysis of G2A expression in K-562 (A), HEL 92.1.7 (B) and THP-1 (C) whole cell lysates and human skeletal muscle tissue extract (D).



G2A (H-70): sc-50309. Immunoperoxidase staining of formalin fixed, paraffin-embedded human epididymis tissue showing membrane and cytoplasmic staining of glandular cells.

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 or our catalog for detailed protocols and support products.


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Try **G2A (G-5): sc-137112**, our highly recommended monoclonal alternative to G2A (H-70).