SANTA CRUZ BIOTECHNOLOGY, INC.

G2A (A-20): sc-23810

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

G2A (for G_2 accumulation) is a seven transmembrane G protein-coupled receptor that is up-regulated 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 G_2/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.

CHROMOSOMAL LOCATION

Genetic locus: GPR132 (human) mapping to 14q32.33; Gpr132 (mouse) mapping to 12 F1.

SOURCE

G2A (A-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region 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.

Blocking peptide available for competition studies, sc-23810 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

STORAGE

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

APPLICATIONS

G2A (A-20) is recommended for detection of G2A 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) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

G2A (A-20) is also recommended for detection of G2A in additional species, including canine.

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.

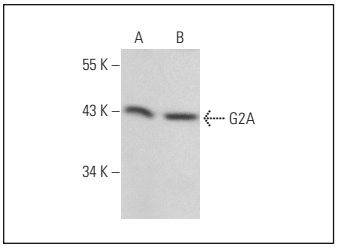
Molecular Weight of G2A: 42-46 kDa.

Positive Controls: CTLL-2 cell lysate: sc-2242 or TK-1 whole cell lysate: sc-364798.

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) Immunoprecipitation: use Protein A/G PLUS-Agarose: sc-2003 (0.5 ml agarose/2.0 ml). 3) 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.

DATA



G2A (A-20): sc-23810. Western blot analysis of G2A expression in CTLL-2 (**A**) and TK-1 (**B**) whole cell lysates.

SELECT PRODUCT CITATIONS

1. Frasch, S.C., et al. 2007. Lysophospholipids of different classes mobilize neutrophil secretory vesicles and induce redundant signaling through G2A. J. Immunol. 178: 6540-6548.
2. Khan, S.Y., et al. 2010. Lysophosphatidylcholines activate G2A inducing $G_{\alpha\ i\text{-}1}$-/$G_{\alpha\ q/11}$-Ca^{2+} flux, $G_{\beta\ \gamma}$-Hck activation and clathrin/β-arrestin-1/GRK6 recruitment in PMNs. Biochem. J. 432: 35-45.

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.