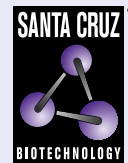


## GRP 94 (9G10): sc-32249



The Power to Question

## BACKGROUND

Heat shock protein (HSP) molecular chaperones are environmental stress-inducible gene products. The human HSP 90 family includes 17 genes that fall into 4 classes: HSP90AA, HSP90AB, HSP90B and TRAP. HSP 90 family members guide the normal folding, intracellular disposition and proteolytic turnover of many key regulators of cell growth, differentiation and survival. HSP 90 $\alpha$ , also designated HSP90A, HSP 86 and LPS-associated protein 2 (LAP2), is a cytosolic enhancer of inducible nitric-oxide synthase (iNOS), with chaperone activity that is important for the transcriptional activity of p53. HSP 90 $\beta$ , also designated HSP90B, HSP 84 and HSPC2, is a cytosolic protein that participates in signaling pathways with PKC  $\epsilon$  to protect cells from external damage, particularly in heat shock-mediated events. GRP 94, also known as tumor rejection antigen 1 (TRA1), ECGP and GP96, localizes to the ER, is highly expressed in BGC-823 human gastric carcinoma cells and is upregulated in human endothelial cells in response to hypoxia by HIF-1. TRAP-1 (TNF receptor-associated protein-1), also designated HSP 75, is a mitochondrial matrix component that plays a role in the induction of apoptosis in response to reactive oxygen species.

## CHROMOSOMAL LOCATION

Genetic locus: HSP90B1 (human) mapping to 12q23.3; Hsp90b1 (mouse) mapping to 10 C1.

## SOURCE

GRP 94 (9G10) is a rat monoclonal antibody raised against chick oviduct GRP94.

## PRODUCT

Each vial contains 200  $\mu$ g IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GRP 94 (9G10) is available conjugated to agarose (sc-32249 AC), 500  $\mu$ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-32249 HRP), 200  $\mu$ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-32249 PE), fluorescein (sc-32249 FITC), Alexa Fluor<sup>®</sup> 488 (sc-32249 AF488), Alexa Fluor<sup>®</sup> 546 (sc-32249 AF546), Alexa Fluor<sup>®</sup> 594 (sc-32249 AF594) or Alexa Fluor<sup>®</sup> 647 (sc-32249 AF647), 200  $\mu$ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor<sup>®</sup> 680 (sc-32249 AF680) or Alexa Fluor<sup>®</sup> 790 (sc-32249 AF790), 200  $\mu$ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

## APPLICATIONS

GRP 94 (9G10) is recommended for detection of GRP 94 of mouse, rat, human and chicken origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2  $\mu$ g per 100-500  $\mu$ g of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and immunohistochemistry (including paraffin-embedded sections) (starting dilution 1:50, dilution range 1:50-1:500).

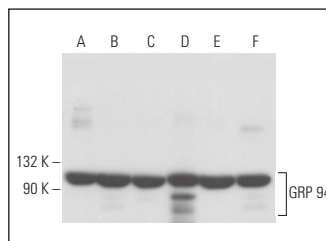
Suitable for use as control antibody for GRP 94 siRNA (h): sc-35523, GRP 94 siRNA (m): sc-35524, GRP 94 shRNA Plasmid (h): sc-35523-SH, GRP 94 shRNA Plasmid (m): sc-35524-SH, GRP 94 shRNA (h) Lentiviral Particles: sc-35523-V and GRP 94 shRNA (m) Lentiviral Particles: sc-35524-V.

Molecular Weight of GRP 94: 94 kDa.

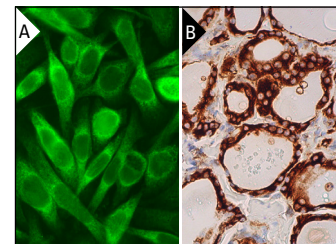
## STORAGE

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

## DATA



GRP 94 (9G10): sc-32249. Western blot analysis of GRP 94 expression in HEL 92.1.7 (A), Hep G2 (B), c4 (C), 3T3-L1 (D), Neuro-2A (E) and C6 (F) whole cell lysates.



GRP 94 (9G10) Alexa Fluor<sup>®</sup> 488: sc-32249 AF488. Direct immunofluorescence staining of formalin-fixed SW480 cells showing cytoplasmic localization. Blocked with UltraCruz<sup>®</sup> Blocking Reagent: sc-516214 (A). GRP 94 (9G10): sc-32249. Immunoperoxidase staining of formalin fixed, paraffin-embedded human thyroid gland tissue showing cytoplasmic staining of glandular cells (B).

## SELECT PRODUCT CITATIONS

- Mortaz, E., et al. 2006. Acetylsalicylic acid-induced release of HSP70 from mast cells results in cell activation through TLR pathway. *Exp. Hematol.* 34: 8-18.
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- ElHady, A.K., et al. 2017. Development of selective Clk1 and -4 inhibitors for cellular depletion of cancer-relevant proteins. *J. Med. Chem.* 60: 5377-5391.
- Xu, D., et al. 2018. Rab18 promotes lipid droplet (LD) growth by tethering the ER to LDs through SNARE and NRZ interactions. *J. Cell Biol.* 217: 975-995.
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- Ma, S., et al. 2021. CD63-mediated cloaking of VEGF in small extracellular vesicles contributes to anti-VEGF therapy resistance. *Cell Rep.* 36: 109549.
- Navarro-Betancourt, J.R., et al. 2022. The unfolded protein response transducer IRE1 $\alpha$  promotes reticulophagy in podocytes. *Biochim. Biophys. Acta Mol. Basis Dis.* 1868: 166391.

## RESEARCH USE

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

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