

GRP 94 (H-212): sc-11402

BACKGROUND

Heat shock protein (HSP) molecular chaperones are environmental stress-inducible gene products. The human HSP 90 family includes 17 genes that fall into four 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 α , 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 β , also designated HSP90B, HSP 84 and HSPC2, is a cytosolic protein that participates in signaling pathways with PKC ϵ 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 (H-212) is a rabbit polyclonal antibody raised against amino acids 200-411 of GRP 94 of human origin.

PRODUCT

Each vial contains 200 μ g IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

APPLICATIONS

RP 94 (H-212) is recommended for detection of GRP 94 of mouse, rat 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)], 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).

GRP 94 (H-212) is also recommended for detection of GRP 94 in additional species, including equine, canine, bovine, porcine and avian.

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.

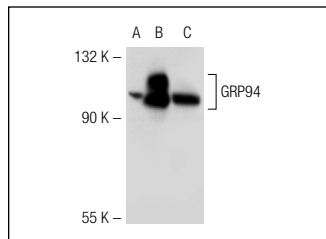
Molecular Weight of GRP 94: 94 kDa.

Positive Controls: GRP94 (m): 293T Lysate: sc-120647, HeLa whole cell lysate: sc-2200 or NIH/3T3 whole cell lysate: sc-2210.

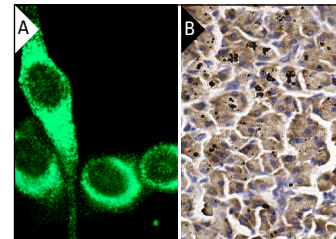
STORAGE

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

DATA



GRP 94 (H-212): sc-11402. Western blot analysis of GRP94 expression in non-transfected 293T: sc-117752 (A), mouse GRP94 transfected 293T: sc-120647 (B) and HeLa (C) whole cell lysates.



GRP 94 (H-212): sc-11402. Immunofluorescence staining of methanol-fixed NIH/3T3 cells showing cytoplasmic staining (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human pancreas tissue showing cytoplasmic staining of glandular cells (B).

SELECT PRODUCT CITATIONS

- Ostrowski, J., et al. 2004. Heterogeneous nuclear ribonucleoprotein K enhances insulin-induced expression of mitochondrial UCP2 protein. *J. Biol. Chem.* 279: 54599-54609.
- Magyar, J.E., et al. 2009. Endoplasmic reticulum stress underlying the proapoptotic effect of epigallocatechin gallate in mouse hepatoma cells. *Int. J. Biochem. Cell Biol.* 41: 694-700.
- Liu, S.H., et al. 2010. IL-13 downregulates PPAR- γ /heme oxygenase-1 via ER stress-stimulated calpain activation: aggravation of activated microglia death. *Cell. Mol. Life Sci.* 67: 1465-1476.
- Wang, G., et al. 2010. Cellular prion protein released on exosomes from macrophages binds to Hsp70. *Acta Biochim. Biophys. Sin.* 42: 345-350.
- Yao, S.T., et al. 2010. Oxidized low density lipoprotein induces macrophage endoplasmic reticulum stress via CD36. *Sheng Li Xue Bao* 62: 433-440.
- Li, T.M., et al. 2011. The novel benzimidazole derivative, MPTB, induces cell apoptosis in human chondrosarcoma cells. *Mol. Carcinog.* 50: 791-803.
- Huang, S.M., et al. 2011. Phloroglucinol derivative MCPP induces cell apoptosis in human colon cancer. *J. Cell. Biochem.* 112: 643-652.
- Peric, D., et al. 2012. Identification of microprocessor-dependent cancer cells allows screening for growth-sustaining micro-RNAs. *Oncogene* 31: 2039-2048.

RESEARCH USE

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



Try **GRP 94 (9G10): sc-32249** or **GRP 94 (H-10): sc-393402**, our highly recommended monoclonal alternatives to GRP 94 (H-212). Also, for AC, HRP, FITC, PE, Alexa Fluor[®] 488 and Alexa Fluor[®] 647 conjugates, see **GRP 94 (9G10): sc-32249**.