**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, also designated HSP90B, 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, 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 (9G10) is a rat monoclonal antibody raised against chick oviduct GRP94.

**PRODUCT**

Each vial contains 200 µg IgG2a 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 µg/0.25 ml agarose in 1 ml, for WB, IHC/P and ELISA; to either phycoerythrin (sc-32249 PE), fluorescein (sc-32249 FITC), Alexa Fluor® 488 (sc-32249 AF488), Alexa Fluor® 546 (sc-32249 AF546), Alexa Fluor® 594 (sc-32249 AF594) or Alexa Fluor® 647 (sc-32249 AF647), 200 µg/ml, for WB (RGB), IF, IHC/P and FCM; and to either Alexa Fluor® 680 (sc-32249 AF680) or Alexa Fluor® 790 (sc-32249 AF790), 200 µg/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 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 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**

**SELECT PRODUCT CITATIONS**

4. Kaufman, D.R., et al. 2017. Deletion of inositol-requiring enzyme-1 ε top to protect cells from external damage, particularly in heat shock-mediated events. GRP 94, also known as tumor rejection antigen1 (TRA1), EC GP 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.

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