

GITR (621): sc-53972

BACKGROUND

The tumor necrosis factor receptor (TNFR) superfamily represents a growing family of type I transmembrane glycoproteins that are involved in various cellular functions, including proliferation, differentiation and programmed cell death. These proteins share homology for cysteine-rich repeats in the extracellular ligand binding domain and an intracellular death domain. Members of the TNFR superfamily transmit signals through protein-protein interactions, and these signals can lead to the activation of either the caspase and Jun kinase pathways, which promote cell death, or the NF κ B pathway, which results in cell survival. The glucocorticoid-induced tumor necrosis factor receptor family-related protein (GITR) is a member of the TNFR superfamily that is preferentially expressed in normal T lymphocytes from thymus, spleen and lymph nodes. GITR shares similarity with Ox40, 4-1BB and CD27 and is thought to inhibit T cell receptor-mediated cell death through the activation of the NF κ B signaling pathway.

REFERENCES

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- Gruss, H.J., et al. 1996. Structural and biological features of the TNF receptor and TNF ligand superfamilies: interactive signals in the pathobiology of Hodgkin's disease. *Ann. Oncol.* 4: 19-26.
- Nocentini, G., et al. 1997. A new member of the tumor necrosis factor/nerve growth factor receptor family inhibits T cell receptor-induced apoptosis. *Proc. Natl. Acad. Sci. USA* 94: 6216-6221.
- Baker, S.J. and Reddy, E.P. 1998. Modulation of life and death by the TNF receptor superfamily. *Oncogene* 17: 3261-3270.
- Gurney, A.L., et al. 1999. Identification of a new member of the tumor necrosis factor family and its receptor, a human ortholog of mouse GITR. *Curr. Biol.* 9: 215-218.

CHROMOSOMAL LOCATION

Genetic locus: TNFRSF18 (human) mapping to 1p36.33.

SOURCE

GITR (621) is a mouse monoclonal antibody raised against recombinant full length GITR of human origin.

PRODUCT

Each vial contains 200 μ g IgG₁ kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

GITR (621) is available conjugated to agarose (sc-53972 AC), 500 μ g/0.25 ml agarose in 1 ml, for IP; to HRP (sc-53972 HRP), 200 μ g/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-53972 PE), fluorescein (sc-53972 FITC), Alexa Fluor[®] 488 (sc-53972 AF488), Alexa Fluor[®] 546 (sc-53972 AF546), Alexa Fluor[®] 594 (sc-53972 AF594) or Alexa Fluor[®] 647 (sc-53972 AF647), 200 μ g/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor[®] 680 (sc-53972 AF680) or Alexa Fluor[®] 790 (sc-53972 AF790), 200 μ g/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

GITR (621) is recommended for detection of GITR of 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), flow cytometry (1 μ g per 1 x 10⁶ cells) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

Suitable for use as control antibody for GITR siRNA (h): sc-43806, GITR shRNA Plasmid (h): sc-43806-SH and GITR shRNA (h) Lentiviral Particles: sc-43806-V.

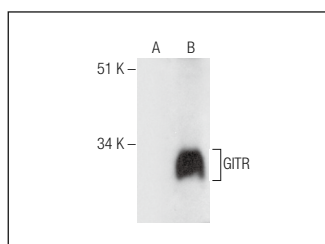
Molecular Weight of GITR: 25 kDa.

Positive Controls: GITR (h): 293T Lysate: sc-371976.

RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker[™] Molecular Weight Standards: sc-2035, UltraCruz[®] Blocking Reagent: sc-516214 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 m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz[®] Mounting Medium: sc-24941 or UltraCruz[®] Hard-set Mounting Medium: sc-359850.

DATA



GITR (621): sc-53972. Western blot analysis of GITR expression in non-transfected: sc-117752 (A) and human GITR transfected: sc-371976 (B) 293T whole cell lysates.

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 for detailed protocols and support products.

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