

GILZ (N-18): sc-26518

BACKGROUND

Glucocorticoid-induced leucine zipper (GILZ) is a leucine zipper protein expressed in normal lymphocytes from thymus, spleen and lymph nodes. GILZ is absent in nonlymphoid tissues including brain, liver and kidney. GILZ mediates the immunosuppressive effects of glucocorticoid hormones, and the expression of GILZ is induced in T-cells by dexamethasone. GILZ protects T cells from an anti-CD3 antibody-induced apoptosis by inhibiting Fas and Fas ligand expression. GILZ interferes with Egr-2, Egr-3, NFAT/AP-1-inducible transcription factors and AP-1. The interaction of GILZ with c-Fos and c-Jun inhibits the binding of active AP-1 to its DNA consensus site *in vitro*. GILZ also binds NF κ B subunits and inhibits the NF κ B nuclear translocation. GILZ inhibits T-cell receptor-induced interleukin-2/interleukin-2 receptor expression. The binding of GILZ to Raf-1 prevents Raf-MEK-ERK activation in the MAPK pathway. GILZ is expressed by normal macrophages in nonlymphoid tissues and by tumor-infiltrating macrophages in Burkitt lymphomas. The gene encoding human GILZ maps to chromosome Xq22.3.

REFERENCES

1. D'Adamio, F., et al. 1997. A new dexamethasone-induced gene of the leucine zipper family protects T lymphocytes from TCR/CD3-activated cell death. *Immunity* 7: 803-812.
2. Mittelstadt, P.R. and Ashwell, J.D. 2001. Inhibition of AP-1 by the glucocorticoid-inducible protein GILZ. *J. Biol. Chem.* 276: 29603-29610.
3. Ayroldi, E., et al. 2001. Modulation of T-cell activation by the glucocorticoid-induced leucine zipper factor via inhibition of nuclear factor κ B. *Blood* 98:743-753.
4. Cannarile, L., et al. 2001. Cloning, chromosomal assignment and tissue distribution of human GILZ, a glucocorticoid hormone-induced gene. *Cell Death Differ.* 8: 201-203.
5. Ayroldi, E., et al. 2002. Glucocorticoid-induced leucine zipper inhibits the Raf-extracellular signal-regulated kinase pathway by binding to Raf-1. *Mol. Cell. Biol.* 22: 7929-7941.
6. Berrebi, D., et al. 2003. Synthesis of glucocorticoid-induced leucine zipper (GILZ) by macrophages: an anti-inflammatory and immunosuppressive mechanism shared by glucocorticoids and IL-10. *Blood* 101: 729-738.

CHROMOSOMAL LOCATION

Genetic locus: TSC22D3 (human) mapping to Xq22.3; Tsc22d3 (mouse) mapping to X F1.

SOURCE

GILZ (N-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping at the N-terminus of GILZ 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.

Blocking peptide available for competition studies, sc-26518 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

APPLICATIONS

GILZ (N-18) is recommended for detection of GILZ of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and 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).

GILZ (N-18) is also recommended for detection of GILZ in additional species, including porcine.

Suitable for use as control antibody for GILZ siRNA (h): sc-43805, GILZ siRNA (m): sc-44809, GILZ shRNA Plasmid (h): sc-43805-SH, GILZ shRNA Plasmid (m): sc-44809-SH, GILZ shRNA (h) Lentiviral Particles: sc-43805-V and GILZ shRNA (m) Lentiviral Particles: sc-44809-V.

Molecular Weight of GILZ: 18 kDa.

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) 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.

SELECT PRODUCT CITATIONS

1. Hamdi, H., et al. 2007. Glucocorticoid-induced leucine zipper: a key protein in the sensitization of monocytes to lipopolysaccharide in alcoholic hepatitis. *Hepatology* 46: 1986-1992.
2. Hoppstädter, J., et al. 2012. Glucocorticoid-induced leucine zipper is down-regulated in human alveolar macrophages upon Toll-like receptor activation. *Eur. J. Immunol.* 42: 1282-1293.

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 or our catalog for detailed protocols and support products.



Try **GILZ (G-5): sc-133215** or **GILZ (D-2): sc-133216**, our highly recommended monoclonal alternatives to GILZ (N-18).