SANTA CRUZ BIOTECHNOLOGY, INC.

# GILZ (FL-134): sc-33780

SANTA CRUZ BIOTECHNOLOGY

*The Power to Question*

## BACKGROUND

Glucocorticoid-induced leucine zipper (GILZ) is a leucine zipper protein expressed in normal lymphocytes from thymus, spleen and lymph nodes. It is absent in nonlymphoid tissues including brain, liver and kidney. GILZ mediates the immunosuppressive effects of glucocorticoid hormones; its expression 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. It 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 NFκB subunits and inhibits the NFκB nuclear translocation. It 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. Ayroldi, E., et al. 2001. Modulation of T-cell activation by the glucocorticoid-induced leucine zipper factor via inhibition of nuclear factor κB. Blood 98: 743-753.


## SOURCE

GILZ (FL-134) is a rabbit polyclonal antibody raised against amino acids 1-134 representing full length GILZ of human origin.

## PRODUCT

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

## APPLICATIONS

GILZ (FL-134) is recommended for detection of GILZ and all other TSC22 family members of mouse, rat and human 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 solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

GILZ (FL-134) is also recommended for detection of GILZ and all other TSC22 family members in additional species, including canine and porcine.

Molecular Weight of GILZ: 18 kDa.

Positive Controls: GILZ (h2): 293 Lysate: sc-112944.

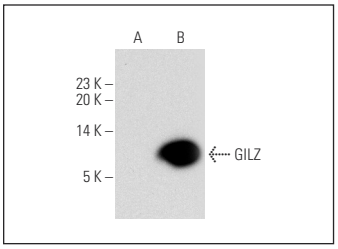
## STORAGE

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

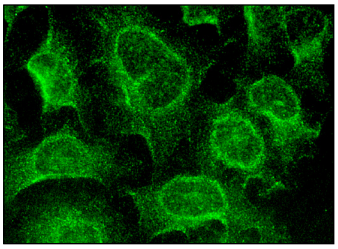
## RESEARCH USE

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

## DATA




GILZ (FL-134): sc-33780. Western blot analysis of GILZ expression in non-transfected: sc-110760 (**A**) and human GILZ transfected: sc-112944 (**B**) 293 whole cell lysates.



GILZ (FL-134): sc-33780. Immunofluorescence staining of methanol-fixed HeLa cells showing nuclear and cytoplasmic localization.

## SELECT PRODUCT CITATIONS


1. Yachi, K., et al. 2007. Localization of glucocorticoid-induced leucine zipper (GILZ) expressing neurons in the central nervous system and its relationship to the stress response. Brain Res. 1159: 141-147.
2. Delfino, D.V., et al. 2011. Glucocorticoid-induced activation of caspase-8 protects the glucocorticoid-induced protein Gilz from proteasomal degradation and induces its binding to SUMO-1 in murine thymocytes. Cell Death Differ. 18: 183-190.
3. Varricchio, L., et al. 2011. The dominant negative β isoform of the glucocorticoid receptor is uniquely expressed in erythroid cells expanded from polycythemia vera patients. Blood 118: 425-436.
4. Joha, S., et al. 2012. GILZ inhibits the mTORC2/AKT pathway in Bcr-Abl$^+$ cells. Oncogene 31: 1419-1430.
5. Li, Z., et al. 2013. Critical roles of glucocorticoid-induced leucine zipper in infectious bursal disease virus (IBDV)-induced suppression of type I Interferon expression and enhancement of IBDV growth in host cells via interaction with VP4. J. Virol. 87: 1221-1231.
6. Ngo, D., et al. 2013. Glucocorticoid-induced leucine zipper (GILZ) regulates testicular FOXO1 activity and spermatogonial stem cell (SSC) function. PLoS ONE 8: e59149.
7. Varricchio L., et al. 2014. Identification of NuRSERY, a new functional HDAC complex composed by HDAC5, GATA1, EKLF and pERK present in human erythroid cells. Int. J. Biochem. Cell Biol. 50: 112-122.
8. Fan, H., et al. 2014. Macrophage migration inhibitory factor inhibits the antiinflammatory effects of glucocorticoids via glucocorticoid-induced leucine zipper. Arthritis Rheumatol. 66: 2059-2070.