

ROG (Y-20): sc-31328

BACKGROUND

GATA-3, a T-cell specific zinc-finger transcription factor, is essential for the development, differentiation, and activation of T helper (Th) cells, which are capable of secreting high levels of cytokines. The GATA-3 interacting protein, ROG (repressor of GATA), also known as TZFP, represses the function of GATA-3 in part by preventing the binding of GATA-3 to its cognate DNA target sequence. Overexpression of ROG in Th cells specifically inhibits the production of cytokines Th1 and Th2, suggesting that ROG may regulate the differentiation of Th cells. Direct binding of ROG to DNA suggests that ROG is a potent negative regulator of Th cytokine genes as well as noncytokine genes. ROG is a lymphoid specific member of the POZ protein family that is expressed at very low levels in resting T-cells. Expression of ROG is substantially higher in both resting and activated B cells.

REFERENCES

1. Pandolfi, P.P., et al. 1995. Targeted disruption of the GATA3 gene causes severe abnormalities in the nervous system and in fetal liver haematopoiesis. *Nat. Genet.* 11: 40-44.
2. Ting, C.N., et al. 1996. Transcription factor GATA-3 is required for development of the T-cell lineage. *Nature* 384: 474-478.
3. Zheng, W., et al. 1997. The transcription factor GATA-3 is necessary and sufficient for Th2 cytokine gene expression in CD4 T cells. *Cell* 89: 587-596.
4. Zhang, D.H., et al. 1997. Transcription factor GATA-3 is differentially expressed in murine Th1 and Th2 cells and controls Th2-specific expression of the interleukin-5 gene. *J. Biol. Chem.* 272: 21597-21603.
5. Miaw, S.C., et al. 2000. ROG, Repressor of GATA, regulates the expression of cytokine genes. *Immunity* 12: 323-333.

CHROMOSOMAL LOCATION

Genetic locus: ZBTB32 (human) mapping to 19q13.12; Zbtb32 (mouse) mapping to 7 B1.

SOURCE

ROG (Y-20) is an affinity purified goat polyclonal antibody raised against a peptide mapping within an internal region of ROG of mouse origin.

PRODUCT

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

Blocking peptide available for competition studies, sc-31328 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

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.

APPLICATIONS

ROG (Y-20) is recommended for detection of ROG of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), 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).

ROG (Y-20) is also recommended for detection of ROG in additional species, including equine, canine and porcine.

Suitable for use as control antibody for ROG siRNA (h): sc-38355, ROG siRNA (m): sc-38356, ROG shRNA Plasmid (h): sc-38355-SH, ROG shRNA Plasmid (m): sc-38356-SH, ROG shRNA (h) Lentiviral Particles: sc-38355-V and ROG shRNA (m) Lentiviral Particles: sc-38356-V.

Molecular Weight of ROG isoform 1: 51 kDa.

Molecular Weight of ROG isoform 2: 11 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.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.