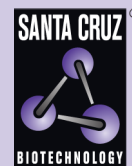


# GATA-1 (N1): sc-266



The Power to Question

## BACKGROUND

Members of the GATA family share a conserved zinc finger DNA-binding domain and are capable of binding the WGATAR consensus sequence. GATA-1 is erythroid-specific and is responsible for the regulated transcription of erythroid genes. It is an essential component in the generation of the erythroid lineage. GATA-2 is expressed in embryonic brain and liver, HeLa and endothelial cells, as well as erythroid cells. Studies with a modified GATA consensus sequence, AGATCTTA, have shown that GATA-2 and GATA-3 recognize this mutated consensus while GATA-1 has poor recognition of this sequence. This indicates broader regulatory capabilities of GATA-2 and GATA-3 than GATA-1. GATA-3 is highly expressed in T lymphocytes. GATA-4, GATA-5 and GATA-6 comprise a subfamily of transcription factors. GATA-4 and GATA-6 are found in heart, pancreas and ovary; lung and liver tissues exhibit GATA-6, but not GATA-4, expression. GATA-5 expression has been observed in differentiated heart and gut tissues and is present throughout the course of development in the heart. Although expression patterns of the various GATA transcription factors may overlap, it is not yet apparent how the GATA factors are able to discriminate in binding their appropriate target sites.

## CHROMOSOMAL LOCATION

Genetic locus: GATA1 (human) mapping to Xp11.23; Gata1 (mouse) mapping to X A1.1.

## SOURCE

GATA-1 (N1) is a rat monoclonal antibody raised against bacterially expressed murine GATA-1.

## PRODUCT

Each vial contains 200 µg IgG<sub>2a</sub> in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-266 X, 200 µg/0.1 ml.

GATA-1 (N1) is available conjugated to agarose (sc-266 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-266 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-266 PE), fluorescein (sc-266 FITC), Alexa Fluor® 488 (sc-266 AF488), Alexa Fluor® 546 (sc-266 AF546), Alexa Fluor® 594 (sc-266 AF594) or Alexa Fluor® 647 (sc-266 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-266 AF680) or Alexa Fluor® 790 (sc-266 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

Alexa Fluor® is a trademark of Molecular Probes, Inc., Oregon, USA

## STORAGE

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

## PROTOCOLS

See our web site at [www.scbt.com](http://www.scbt.com) for detailed protocols and support products.

## APPLICATIONS

GATA-1 (N1) is recommended for detection of GATA-1 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)] and immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500); inhibits DNA binding in gel shift studies.

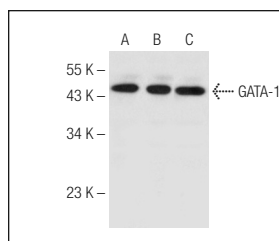
Suitable for use as control antibody for GATA-1 siRNA (h): sc-29330, GATA-1 siRNA (m): sc-35452, GATA-1 shRNA Plasmid (h): sc-29330-SH, GATA-1 shRNA Plasmid (m): sc-35452-SH, GATA-1 shRNA (h) Lentiviral Particles: sc-29330-V and GATA-1 shRNA (m) Lentiviral Particles: sc-35452-V.

GATA-1 (N1) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

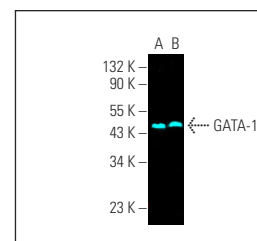
Molecular Weight of GATA-1: 47 kDa.

Positive Controls: K-562 nuclear extract: sc-2130, MEG-01 cell lysate: sc-2283 or HEL 92.1.7 cell lysate: sc-2270.

## DATA



GATA-1 (N1): sc-266. Western blot analysis of GATA-1 expression in HEL 92.1.7 (A), MEG-01 (B) and TF-1 (C) whole cell lysates.



GATA-1 (N1) Alexa Fluor® 647: sc-266 AF647. Direct fluorescent western blot analysis of GATA-1 expression in K-562 nuclear extract (A) and HEL 92.1.7 whole cell lysate (B). Blocked with UltraCruz® Blocking Reagent: sc-516214. Cruz Marker™ Molecular Weight Standards detected with Cruz Marker MW Tag-Alexa Fluor® 790: sc-516731.

## SELECT PRODUCT CITATIONS

1. Nagata, Y., et al. 1995. Thrombopoietin induces megakaryocyte differentiation in hematopoietic progenitor FDC-P2 cells. *J. Biol. Chem.* 270: 19673-19675.
2. Che, Y., et al. 2012. Co-expression of XIAP and cyclin D1 complex correlates with a poor prognosis in patients with hepatocellular carcinoma. *Am. J. Pathol.* 180: 1798-1807.
3. Malinge, S., et al. 2013. Ikaros inhibits megakaryopoiesis through functional interaction with GATA-1 and NOTCH signaling. *Blood* 121: 2440-2451.
4. Arlet, J.B., et al. 2014. HSP70 sequestration by free  $\alpha$ -globin promotes ineffective erythropoiesis in  $\beta$ -thalassaemia. *Nature* 514: 242-246.
5. Cremona, M.A., et al. 2015. Peak shape clustering reveals biological insights. *BMC Bioinformatics* 16: 349.

## RESEARCH USE

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