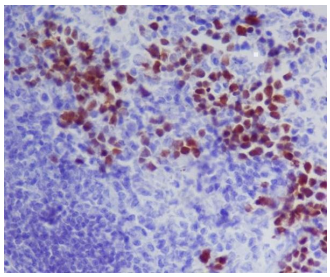
GATA1 Antibody [clone ABCB-7] (RQ5460)

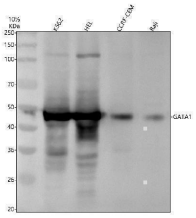
Catalog No.	Formulation	Size
RQ5460	Antibody in PBS with 0.02% sodium azide, 50% glycerol and 0.4-0.5mg/ml BSA	100 ul

Bulk quote request

Availability	1-2 weeks
Species Reactivity	Human, Mouse
Format	Purified
Host	Rabbit
Clonality	Rabbit Monoclonal
Isotype	Rabbit IgG
Clone Name	ABCB-7
Purity	Affinity purified
UniProt	P15976
Applications	Western blot: 1:500-1:2000 Immunohistochemistry: 1:50-1:200
Limitations	This GATA1 antibody is available for research use only.



GATA1 Antibody Mouse Spleen IHC. Immunohistochemical staining of FFPE mouse spleen with GATA1 antibody demonstrated strong nuclear staining in erythroid precursor cells, consistent with the localization of GATA1 as a lineage-defining transcription factor. GATA1 is a zinc finger transcription factor that regulates genes required for erythropoiesis, hemoglobin synthesis, and terminal maturation of red blood cells while also contributing to megakaryocyte differentiation. The predominantly nuclear staining pattern reflects its role as a transcriptional regulator controlling hematopoietic gene expression. These results support the utility of GATA1 Antibody for studies of hematopoiesis, erythropoiesis, hematologic malignancies, and developmental hematology.



GATA1 Antibody Human Hematopoietic Cell WB. Western blot analysis of GATA1 expression was performed using anti-GATA1 antibody. Lane 1: human K562 cell lysate. Lane 2: human HEL cell lysate. Lane 3: human CCRF-CEM cell lysate. Lane 4: human Raji cell lysate. GATA1 is a zinc finger transcription factor that serves as a master regulator of erythropoiesis by controlling genes required for erythroid lineage commitment, hemoglobin synthesis, and red blood cell maturation. A specific immunoreactive band is detected at approximately 43 kDa, consistent with the expected molecular weight of GATA1. Strong expression is observed in the erythroid-derived K562 and HEL cell lines, supporting the established role of GATA1 in hematopoietic differentiation. These results demonstrate the utility of GATA1 Antibody for studies of hematopoiesis, erythropoiesis, developmental biology, and hematopoietic transcriptional regulation.

Description

GATA1 Antibody recognizes GATA1, a zinc finger transcription factor that functions as a master regulator of hematopoiesis and erythroid differentiation. GATA1 binds GATA consensus DNA sequences within regulatory regions of target genes to control transcriptional programs required for erythrocyte maturation, hemoglobin synthesis, and megakaryocyte development. As one of the most important lineage-specific transcription factors in blood cell development, GATA1 directs the commitment and maturation of erythroid progenitor cells while coordinating gene expression necessary for normal hematopoietic function. Because of its essential biological role, GATA1 is widely used as a biomarker for studies of hematopoiesis, erythropoiesis, and developmental biology.

GATA1 functions within a complex regulatory network that includes TAL1, KLF1, RUNX1, and FOG1 to promote erythroid lineage commitment and suppress alternative developmental pathways. In addition to regulating erythrocyte development, GATA1 contributes to megakaryocyte maturation, platelet formation, eosinophil differentiation, and mast cell development. Its activity is tightly controlled throughout embryonic development and adult hematopoiesis, ensuring proper blood cell production and maintenance of hematopoietic homeostasis.

Altered GATA1 expression or function has been associated with numerous hematologic disorders, including congenital anemias, Diamond-Blackfan anemia, transient abnormal myelopoiesis, acute megakaryoblastic leukemia, and myelodysplastic syndromes. Consequently, GATA1 has become an important research target for investigations of blood cell development, leukemia biology, stem cell differentiation, and transcriptional regulation. GATA1 Antibody is an excellent research tool for studies of hematopoiesis, erythropoiesis, developmental biology, hematologic malignancies, and regenerative medicine.

Explore our GATA1 Antibody / Hematopoietic Transcription Factor Antibody page to learn more about this master regulator of hematopoietic differentiation, erythropoiesis, and blood cell development.

Application Notes

Optimal dilution of the GATA1 antibody should be determined by the researcher.

Immunogen

A synthetic peptide specific to human GATA1 was used as the immunogen for the GATA1 antibody.

Storage

Store the GATA1 antibody at -20oC.

Copyright © NSJ Bioreagents. All rights reserved.