Anti-GATA1 Antibody [JA10-32]

ET1704-41

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IHC-P
Molecular Wt:	Predicted band size: 43 kDa
Clone number:	JA10-32

Description: GATA-binding factor 1 or GATA-1 (also termed Erythroid transcription factor) is the founding member of the GATA family of transcription factors. This protein is widely expressed throughout vertebrate species. In humans and mice, it is encoded by the GATA1 and Gata1 genes, respectively. These genes are located on the X chromosome in both species. GATA1 regulates the expression (i.e. formation of the genes' products) of an ensemble of genes that mediate the development of red blood cells and platelets. Its critical roles in red blood cell formation include promoting the maturation of precursor cells, e.g. erythroblasts, to red blood cells and stimulating these cells to erect their cytoskeleton and biosynthesize their oxygen-carrying components viz., hemoglobin and heme. GATA1 plays a similarly critical role in the maturation of blood platelets from megakaryoblasts, promegakaryocytes, and megakaryocytes; the latter cells then shed membrane-enclosed fragments of their cytoplasm, i.e. platelets, into the blood. Reduced levels of GATA1 due to reductions in the translation of GATA1 mRNA into its transcription factor product are associated with promoting the progression of myelofibrosis, i.e. a malignant disease that involves the replacement of bone marrow cells by fibrous tissue and extramedullary hematopoiesis, i.e. the extension of blood cell-forming cells to sites outside of the bone marrow.

Immunogen:	Recombinant protein within human GATA1 aa 1-250.
Positive control:	K-562 cell lysates, mouse spleen tissue, mouse testis tissue, human breast carcinoma tissue, human liver tissue.
Subcellular location:	Nucleus.
Database links:	SwissProt: P15976 Human | P17679 Mouse
Recommended Dilutions:	
WB	1:1,000
IHC-P	1:200-1:1,000
Storage Buffer:	1*TBS (pH7.4), 0.05% BSA, 40% Glycerol. Preservative: 0.05% Sodium Azide.
Storage Instruction:	Shipped at 4℃. Store at +4℃ short term (1-2 weeks). It is recommended to aliquot into single-use upon delivery. Store at -20℃ long term.
Purity:	Protein A affinity purified.

Images

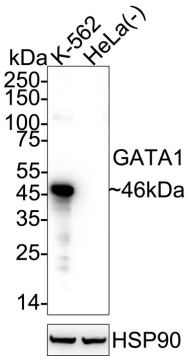

Fig1: Western blot analysis of GATA1 on different lysates with Rabbit anti-GATA1 antibody (ET1704-41) at 1/1,000 dilution.

Lane 1: K-562 cell lysate
Lane 2: HeLa cell lysate (negative)

Lysates/proteins at 20 µg/Lane.

Predicted band size: 43 kDa
Observed band size: 46 kDa

Exposure time: 20 seconds; ECL: K1801;

4-20% SDS-PAGE gel.

Proteins were transferred to a PVDF membrane and blocked with 5% NFDM/TBST for 1 hour at room temperature. The primary antibody (ET1704-41) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1/50,000 dilution was used for 1 hour at room temperature.

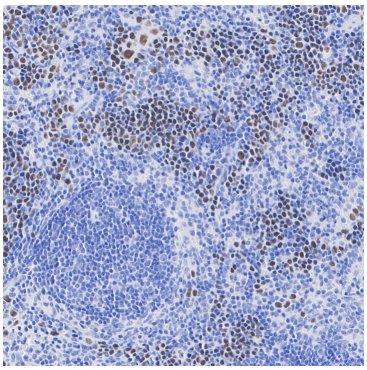

Fig2: Immunohistochemical analysis of paraffin-embedded mouse spleen tissue with Rabbit anti-GATA1 antibody (ET1704-41) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-41) at 1/1,000 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

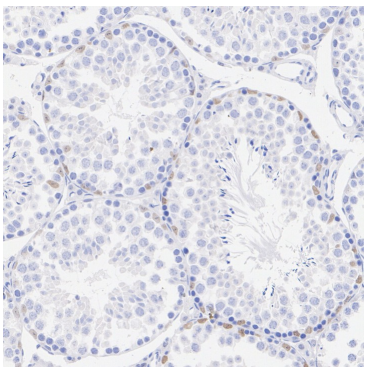

Fig3: Immunohistochemical analysis of paraffin-embedded mouse testis tissue with Rabbit anti-GATA1 antibody (ET1704-41) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-41) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

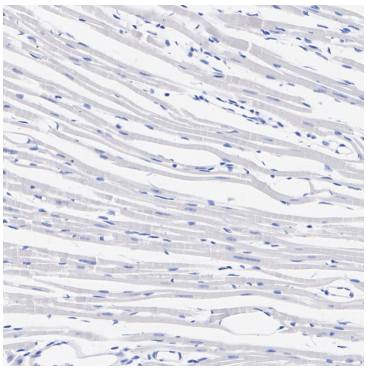

Fig4: Immunohistochemical analysis of paraffin-embedded mouse heart tissue (negative) with Rabbit anti-GATA1 antibody (ET1704-41) at 1/200 dilution.

The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes. The tissues were blocked in 1% BSA for 20 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-41) at 1/200 dilution for 1 hour at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

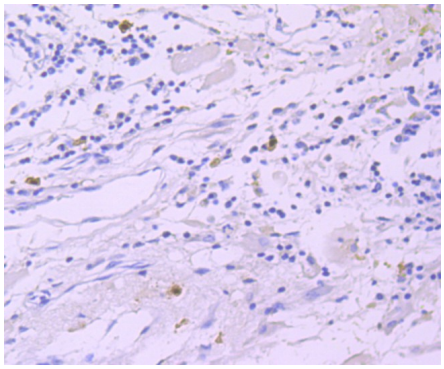

Fig5: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue using anti-GATA1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-41, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

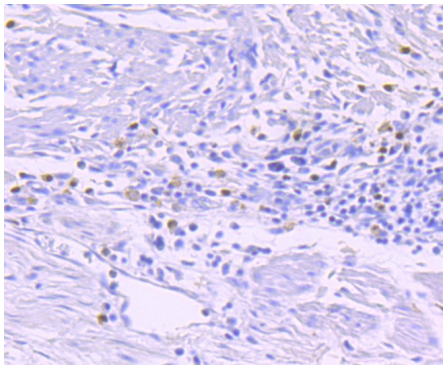

Fig6: Immunohistochemical analysis of paraffin-embedded human liver tissue using anti-GATA1 antibody. The section was pre-treated using heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 20 minutes.The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (ET1704-41, 1/50) for 30 minutes at room temperature. The detection was performed using an HRP conjugated compact polymer system. DAB was used as the chromogen. Tissues were counterstained with hematoxylin and mounted with DPX.

Background References

1. Zeng Y. et al. Knockdown of ZNF268, which is transcriptionally downregulated by GATA-1, promotes proliferation of K562 cells. PLoS ONE 7:E29518-E29518(2012).