Anti-GATA3 Antibody [A3G3]

EM1902-33

Product Type:	Mouse monoclonal IgG2c, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, IHC-P
Molecular Wt:	Predicted band size: 48 kDa.
Clone number:	A3G3

Description: GATA3 is a transcription factor that in humans is encoded by the GATA3 gene. Studies in animal models and humans indicate that it controls the expression of a wide range of biologically and clinically important genes. The GATA3 transcription factor is critical for the embryonic development of various tissues as well as for inflammatory and humoral immune responses and the proper functioning of the endothelium of blood vessels. GATA3 haploinsufficiency (i.e. lose of one or the two inherited GATA3 genes) results in a congenital disorder termed the Barakat syndrome. Current clinical and laboratory research is focusing on determining the benefits of directly or indirectly blocking the action of GATA3 in inflammatory and allergic diseases such as asthma. It is also proposed to be a clinically important marker for various types of cancer, particularly those of the breast. However, the role, if any, of GATA3 in the development of these cancers is under study and remains unclear.

Immunogen: Synthetic peptide within N-terminal Human GATA3.

Positive control: SH-SY5Y cell lysate, MCF7 cell lysate, Jurkat cell lysate, SH-SY5Y, MCF-7, human breast carcinoma tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P23771 Human

Recommended Dilutions:

WB	1:500-1:2,000
IF-Cell	1:50-1:200
IHC-P	1:1,000

Storage Buffer: 1*TBS (pH7.4), 0.2% BSA, 50% Glycerol. Preservative: 0.05% Sodium Azide.

Storage Instruction: Store at +4℃ after thawing. Aliquot store at -20℃. Avoid repeated freeze / thaw cycles.

Purity: Protein A affinity purified.

Images

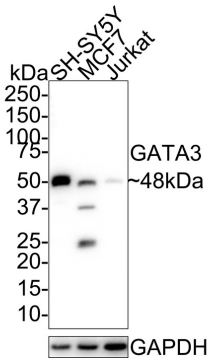

Fig1: Western blot analysis of GATA3 on different lysates with Mouse anti-GATA3 antibody (EM1902-33) at 1/1,000 dilution.

Lane 1: SH-SY5Y cell lysate
Lane 2: MCF7 cell lysate
Lane 3: Jurkat cell lysate

Lysates/proteins at 20 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 48/37/25 kDa

Exposure time: 1 minute;

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 (EM1902-33) at 1/1,000 dilution was used in 5% NFDM/TBST at 4℃ overnight. Goat Anti-Mouse IgG - HRP Secondary Antibody (HA1006) at 1/50,000 dilution was used for 1 hour at room temperature.

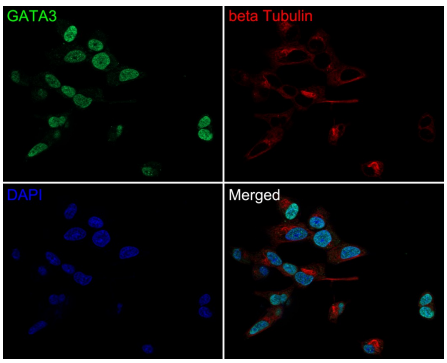

Fig2: Immunocytochemistry analysis of SH-SY5Y cells labeling GATA3 with Mouse anti-GATA3 antibody (EM1902-33) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-GATA3 antibody (EM1902-33) at 1/50 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

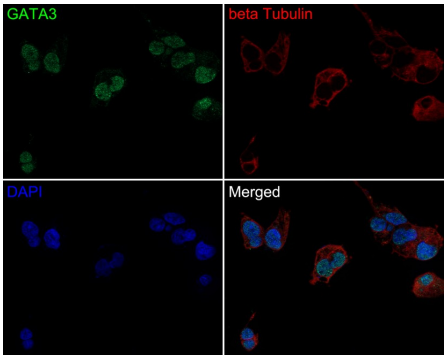

Fig3: Immunocytochemistry analysis of MCF-7 cells labeling GATA3 with Mouse anti-GATA3 antibody (EM1902-33) at 1/50 dilution.

Cells were fixed in 4% paraformaldehyde for 30 minutes, permeabilized with 0.05% Triton X-100 in PBS for 20 minutes, and then blocked with 2% negative goat serum for 30 minutes at room temperature. Cells were then incubated with Mouse anti-GATA3 antibody (EM1902-33) at 1/50 dilution in 2% negative goat serum overnight at 4 ℃. Goat Anti-Mouse IgG H&L (iFluor™ 488, HA1125) was used as the secondary antibody at 1/1,000 dilution. Nuclear DNA was labelled in blue with DAPI.

beta Tubulin (ET1602-4, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Rabbit IgG H&L (iFluor™ 594, HA1122) were used as the secondary antibody at 1/1,000 dilution.

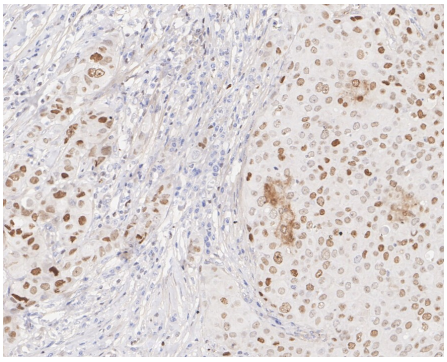

Fig4: Immunohistochemical analysis of paraffin-embedded human breast carcinoma tissue with Mouse anti-GATA3 antibody (EM1902-33) at 1/1,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 2 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 (EM1902-33) 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.

Background References

1. Lin MC et al. GATA3 interacts with and stabilizes HIF-1α to enhance cancer cell invasiveness. Oncogene 36(30):4243-4252 (2017).