Anti-HMGA2 Antibody [PSH05-53]

HA722295

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse
Applications:	WB, IF-Cell, IHC-P, FC, IF-Tissue
Molecular Wt:	Predicted band size: 12 kDa
Clone number:	PSH05-53

Description: High-mobility group AT-hook 2, also known as HMGA2, is a protein that, in humans, is encoded by the HMGA2 gene. This gene encodes a protein that belongs to the non-histone chromosomal high-mobility group (HMG) protein family. HMG proteins function as architectural factors and are essential components of the enhanceosome. This protein contains structural DNA-binding domains and may act as a transcriptional regulating factor. Identification of the deletion, amplification, and rearrangement of this gene that are associated with lipomas suggests a role in adipogenesis and mesenchymal differentiation. A gene knock-out study of the mouse counterpart demonstrated that this gene is involved in diet-induced obesity. Alternate transcriptional splice variants, encoding different isoforms, have been characterized. The expression of HMGA2 in adult tissues is commonly associated with both malignant and benign tumor formation, as well as certain characteristic cancer-promoting mutations. Homologous proteins with highly conserved sequences are found in other mammalian species, including lab mice (Mus musculus).

Immunogen: Synthetic peptide within Human HMGA2 aa 70-120.

Positive control: HepG2 cell lysate, MCF7 cell lysate, NIH/3T3 cell lysate, NIH/3T3, human colon cancer tissue, mouse colon tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P52926 Human | P52927 Mouse

Recommended Dilutions:

WB	1:1,000
IF-Cell	1:1,000
IHC-P	1:8,000
FC	1:1,000
IF-Tissue	1:200-1:1,000

Storage Buffer: PBS (pH7.4), 0.1% 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

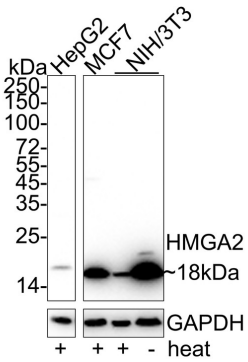

Fig1: Western blot analysis of HMGA2 on different lysates with Rabbit anti-HMGA2 antibody (HA722295) at 1/1,000 dilution.

Lane 1: HepG2 cell lysate
Lane 2: MCF7 cell lysate
Lane 3: NIH/3T3 cell lysate
Lane 4: NIH/3T3 cell lysate (no heat)

Notice: no heat means the lysate is not boiled.

Lysates/proteins at 20 µg/Lane.

Predicted band size: 12 kDa
Observed band size: 18 kDa

Exposure time: 10 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 (HA722295) 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.

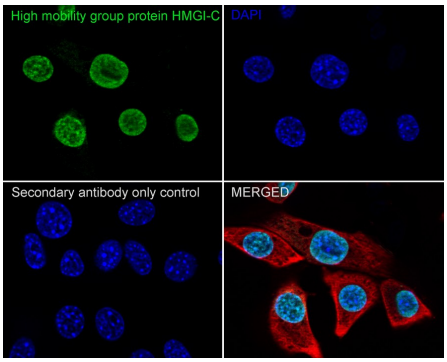

Fig2: Immunocytochemistry analysis of NIH/3T3 cells labeling HMGA2 with Rabbit anti-HMGA2 antibody (HA722295) at 1/2,500 dilution.

Cells were fixed in 4% paraformaldehyde for 20 minutes at room temperature, permeabilized with 0.1% Triton X-100 in PBS for 5 minutes at room temperature, then blocked with 1% BSA in 10% negative goat serum for 1 hour at room temperature. Cells were then incubated with Rabbit anti-HMGA2 antibody (HA722295) at 1/2,500 dilution in 1% BSA in PBST overnight at 4 ℃. Goat Anti-Rabbit IgG H&L (iFluor™ 488, HA1121) was used as the secondary antibody at 1/1,000 dilution. PBS instead of the primary antibody was used as the secondary antibody only control. Nuclear DNA was labelled in blue with DAPI.

Beta tubulin (M1305-2, red) was stained at 1/100 dilution overnight at +4℃. Goat Anti-Mouse IgG H&L (iFluor™ 594, HA1126) was used as the secondary antibody at 1/1,000 dilution.

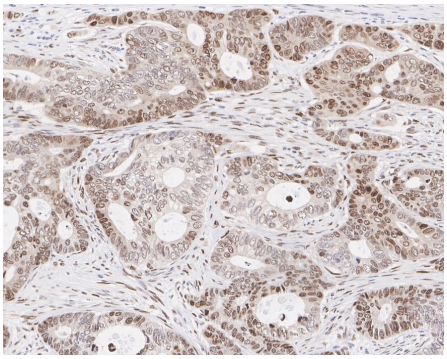

Fig3: Immunohistochemical analysis of paraffin-embedded human colon cancer tissue with Rabbit anti-HMGA2 antibody (HA722295) at 1/8,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) 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 (HA722295) at 1/8,000 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.

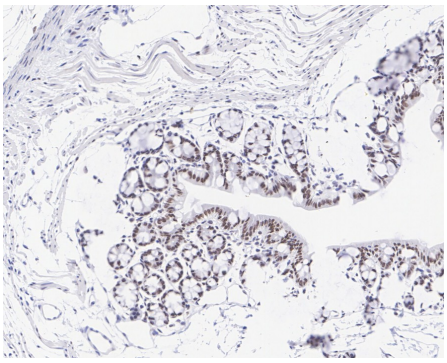

Fig4: Immunohistochemical analysis of paraffin-embedded mouse colon tissue with Rabbit anti-HMGA2 antibody (HA722295) at 1/8,000 dilution.

The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) (high pressure) 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 (HA722295) at 1/8,000 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.

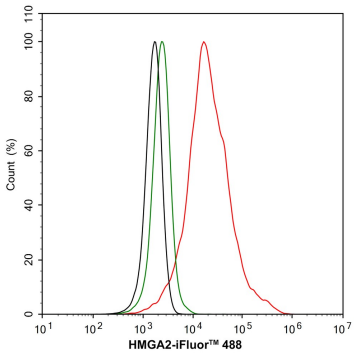

Fig5: Flow cytometric analysis of NIH/3T3 cells labeling HMGA2.

Cells were fixed and permeabilized. Then stained with the primary antibody (HA722295, 1μg/mL) (red) compared with Rabbit IgG Isotype Control (green). After incubation of the primary antibody at +4℃ for an hour, the cells were stained with a iFluor™ 488 conjugate-Goat anti-Rabbit IgG Secondary antibody (HA1121) at 1/1,000 dilution for 30 minutes at +4℃. Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Wang X et al. HMGA2 facilitates colorectal cancer progression via STAT3-mediated tumor-associated macrophage recruitment. Theranostics. 2022 Jan
2. Mansoori B et al. HMGA2 as a Critical Regulator in Cancer Development. Genes (Basel). 2021 Feb