Anti-TTF1 Antibody [JE61-73]

HA720067

Product Type:	Recombinant Rabbit monoclonal IgG, primary antibodies
Species reactivity:	Human, Mouse, Rat
Applications:	IHC-P, WB, mIHC
Molecular Wt:	Predicted band size: 39 kDa
Clone number:	JE61-73

Description: This gene encodes a protein initially identified as a thyroid-specific transcription factor. The encoded protein binds to the thyroglobulin promoter and regulates the expression of thyroid-specific genes but has also been shown to regulate the expression of genes involved in morphogenesis. Mutations and deletions in this gene are associated with benign hereditary chorea, choreoathetosis, congenital hypothyroidism, and neonatal respiratory distress, and may be associated with thyroid cancer. Multiple transcript variants encoding different isoforms have been found for this gene. This gene shares the symbol/alias 'TTF1' with another gene, transcription termination factor 1, which plays a role in ribosomal gene transcription.

Immunogen: Recombinant protein within human TTF1 aa 272-371/371.

Positive control: NCI-H441 cell lysate, TT cell lysate, A549 cell lysate, HeLa cell lysate, mouse liver tissue lysate, human lung carcinoma tissue, human thyroid carcinoma tissue, human thyroid tissue, mouse lung tissue, rat lung tissue.

Subcellular location: Nucleus.

Database links: SwissProt: P43699 Human | P50220 Mouse | P23441 Rat

Recommended Dilutions:

IHC-P	1:1,000-1:5,000
WB	1:1,000
mIHC	1:4,000

Storage Buffer: 1*TBS (pH7.4), 0.05% BSA, 40% 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

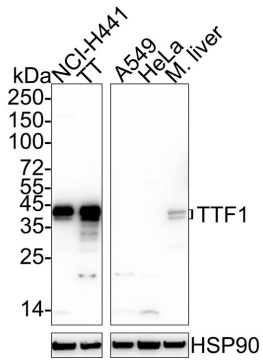

Fig1: Western blot analysis of TTF1 on different lysates with Rabbit anti-TTF1 antibody (HA720067) at 1/1,000 dilution.

Lane 1: NCI-H441 cell lysate (20 µg/Lane)
Lane 2: TT cell lysate (20 µg/Lane)
Lane 3: A549 cell lysate (negative) (20 µg/Lane)
Lane 4: HeLa cell lysate (negative) (20 µg/Lane)
Lane 5: Mouse liver tissue lysate (40 µg/Lane)

Predicted band size: 39 kDa
Observed band size: 39/42 kDa

Exposure time: 25 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 (HA720067) 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.

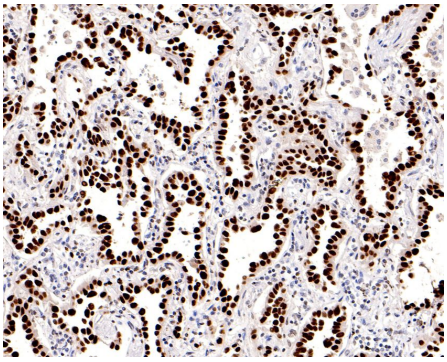

Fig2: Immunohistochemical analysis of paraffin-embedded human lung carcinoma tissue using anti-TTF1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720067, 1/2,000) 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.

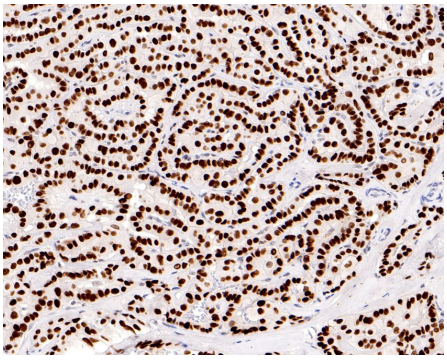

Fig3: Immunohistochemical analysis of paraffin-embedded human thyroid carcinoma tissue using anti-TTF1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720067, 1/2,000) 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.

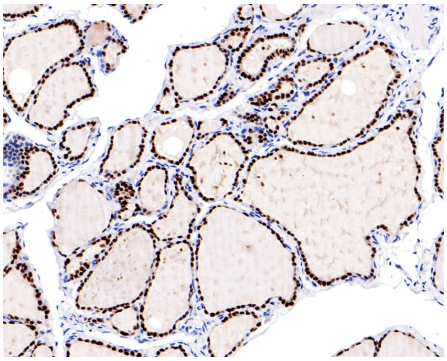

Fig4: Immunohistochemical analysis of paraffin-embedded human thyroid tissue using anti-TTF1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720067, 1/2,000) 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.

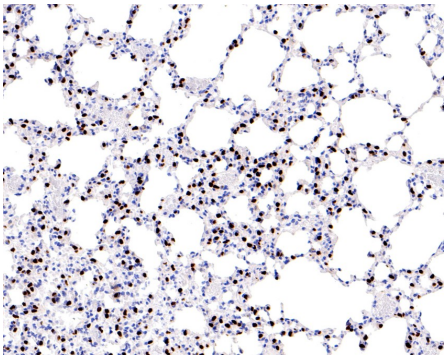

Fig5: Immunohistochemical analysis of paraffin-embedded mouse lung tissue using anti-TTF1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720067, 1/2,000) 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.

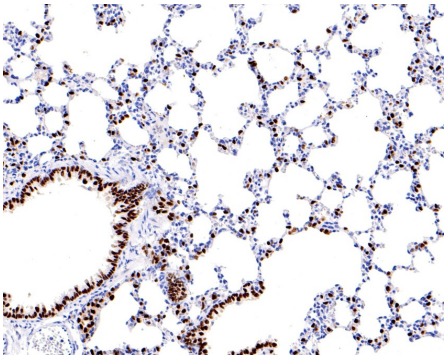

Fig6: Immunohistochemical analysis of paraffin-embedded rat lung tissue using anti-TTF1 antibody. The section was pre-treated using heat mediated antigen retrieval with sodium citrate buffer (pH 6.0) for 20 minutes. The tissues were blocked in 5% BSA for 30 minutes at room temperature, washed with ddH_2O and PBS, and then probed with the primary antibody (HA720067, 1/2,000) 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.

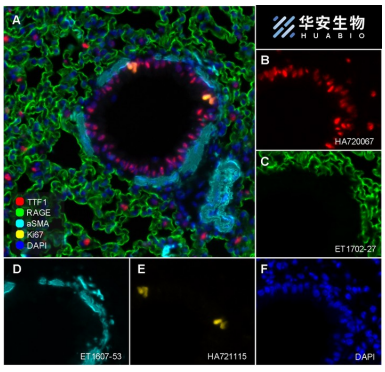

Fig7: Fluorescence multiplex immunohistochemical analysis of mouse lung (Formalin/PFA-fixed paraffin-embedded sections). Panel A: the merged image of anti-TTF1 (HA720067, Red), anti-RAGE (ET1702-27, Green), anti-aSMA (ET1607-53, Cyan) and anti-Ki67 (HA721115, Yellow) on mouse lung. HRP Conjugated UltraPolymer Goat Polyclonal Antibody HA1119/HA1120 was used as a secondary antibody. The immunostaining was performed with the Sequential Immuno-staining Kit (IRISKit™MH010101, www.luminiris.cn). The section was incubated in four rounds of staining: in the order of HA720067 (1/4,000 dilution), ET1702-27 (1/3,000 dilution), ET1607-53 (1/10,000 dilution) and HA721115 (1/3,000 dilution) for 20 mins at room temperature. Each round was followed by a separate fluorescent tyramide signal amplification system. Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0) for 30 mins at 95℃. DAPI (blue) was used as a nuclear counter stain. Image acquisition was performed with Olympus VS200 Slide Scanner.

Background References

1. Kong R et al. Transcriptional Circuitry of NKX2-1 and SOX1 Defines an Unrecognized Lineage Subtype of Small-Cell Lung Cancer. Am J Respir Crit Care Med. 2022 Dec
2. Ebisudani T et al. Genotype-phenotype mapping of a patient-derived lung cancer organoid biobank identifies NKX2-1-defined Wnt dependency in lung adenocarcinoma. Cell Rep. 2023 Mar