Anti-PAX8 Antibody

ER1901-98

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IHC-P, IF-Cell, FC
Molecular Wt:	Predicted band size: 48 kDa

Description: The Pax family encodes transcription factors that function during embryogenesis and regulate the temporal and position-dependent differentiation of cells. Pax-8 is expressed in the developing and adult thyroid, the developing secretory system and at lower levels, in the adult kidney. Pax-8 complexes with TTF-1 and TTF-2 to induce thyroid follicular cell differentiation and thyroid hormone biosynthesis by regulating the expression of sodium iodide symporter (NIS), thyroid peroxidase (TPO), thyroglobulin (TG) and the thyrotropin receptor (TSHR). Treatment of FRTL-5 cells with TGFβ1 decreases Pax-8 mRNA levels and Pax-8 DNA binding activity, which suppresses the expression of TG and the formation of thyrocytes. Patients who have autosomal dominant mutations of the Pax-8 gene develop thyroid dysgenesis. The Pax-8 gene produces six isoforms, A to F, that are generated by alternative splicing and differ in their carboxy-terminal regions. The Pax-8 isoforms display different DNA binding capacities and are thought to be functionally distinct. The gene which encodes Pax-8 maps to human chromosome 2q12-q14.

Immunogen: Recombinant protein within Human PAX8 aa 150-450.

Positive control: SKOV-3 cell lysates, SKOV-3, human thyroid tissue.

Subcellular location: Nucleus.

Database links: SwissProt: Q06710 Human

Recommended Dilutions:

WB	1:1,000
IHC-P	1:1,000-1:5,000
IF-Cell	1:50-1:200
FC	1:50-1:100

Storage Buffer: 1*PBS (pH7.4), 0.2% BSA, 50% 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: Immunogen affinity purified.

Images

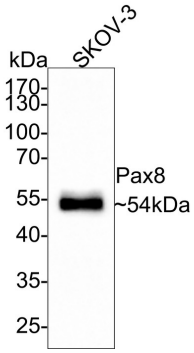

Fig1: Western blot analysis of PAX8 on SKOV-3 cell lysates with Rabbit anti-PAX8 antibody (ER1901-98) at 1/1,000 dilution.

Lysates/proteins at 5 µg/Lane.

Predicted band size: 48 kDa
Observed band size: 54 kDa

Exposure time: 5 minutes;

10% 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 (ER1901-98) at 1/1,000 dilution was used in 5% NFDM/TBST at room temperature for 2 hours. Goat Anti-Rabbit IgG - HRP Secondary Antibody (HA1001) at 1:200,000 dilution was used for 1 hour at room temperature.

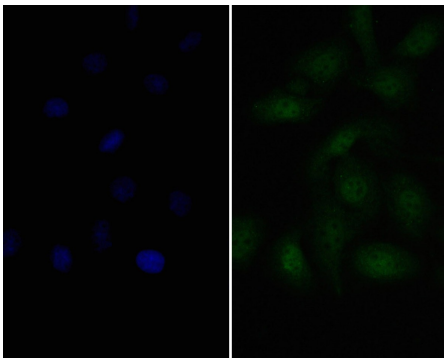

Fig2: ICC staining of PAX8 in SKOV-3 cells (green). Formalin fixed cells were permeabilized with 0.1% Triton X-100 in TBS for 10 minutes at room temperature and blocked with 1% Blocker BSA for 15 minutes at room temperature. Cells were probed with the primary antibody (ER1901-98, 1/100) for 1 hour at room temperature, washed with PBS. Alexa Fluor®488 Goat anti-Rabbit IgG was used as the secondary antibody at 1/100 dilution. The nuclear counter stain is DAPI (blue).

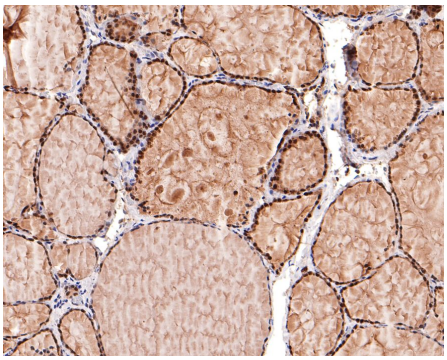

Fig3: Immunohistochemical analysis of paraffin-embedded human thyroid tissue with Rabbit anti-PAX8 antibody (ER1901-98) at 1/5,000 dilution.

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 (ER1901-98) at 1/5,000 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.

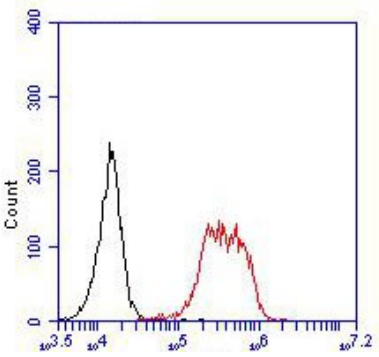

Fig4: Flow cytometric analysis of PAX8 was done on SKOV-3 cells. The cells were fixed, permeabilized and stained with the primary antibody (ER1901-98, 1/100) (red). After incubation of the primary antibody at room temperature for an hour, the cells were stained with a Alexa Fluor 488-conjugated goat anti-rabbit IgG Secondary antibody at 1/500 dilution for 30 minutes.Unlabelled sample was used as a control (cells without incubation with primary antibody; black).

Background References

1. Di Palma T et al. TAZ is a coactivator for Pax8 and TTF-1, two transcription factors involved in thyroid differentiation. Exp Cell Res 315:162-175 (2009).
2. Macchia P E et al. PAX8 mutations associated with congenital hypothyroidism caused by thyroid dysgenesis. Nat Genet 19:83-86 (1998) .