Anti-PAX8 Antibody

ER1802-51

Product Type:	Rabbit polyclonal IgG, primary antibodies
Species reactivity:	Human
Applications:	WB, IF-Cell, IHC-P, 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: Synthetic peptide within C-terminal Human PAX8.

Positive control: SKOV-3, human thyroid gland tissue, SiHa.

Subcellular location: Nucleus.

Database links: SwissProt: Q06710 Human

Recommended Dilutions:

WB	1:500
IF-Cell	1:50-1:200
IHC-P	1:50-1:400
FC	1:50-1:100

Storage Buffer: 1*PBS (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: Immunogen affinity purified.

Images

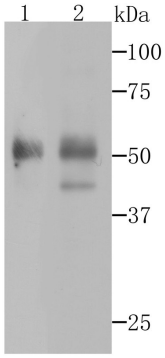

Fig1: Western blot analysis of Pax8 on human thyroid gland tissue and SKOV-3 cell lysates using anti-Pax8 antibody at 1/500 dilution.

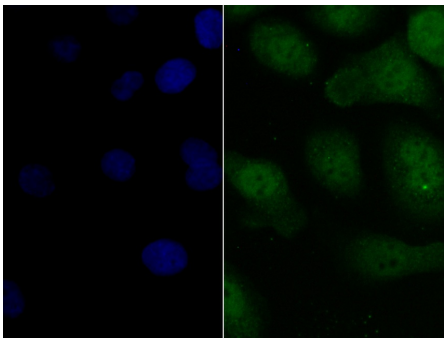

Fig2: ICC staining Pax8 in SKOV-3 cells (green). The nuclear counter stain is DAPI (blue). Cells were fixed in paraformaldehyde, permeabilised with 0.25% Triton X100/PBS.

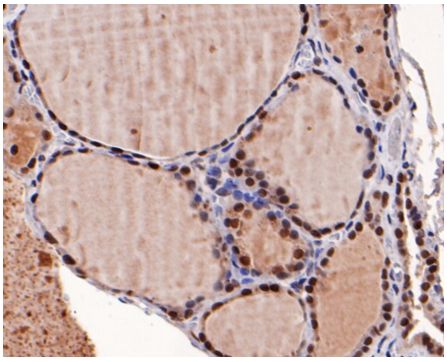

Fig3: Immunohistochemical analysis of paraffin-embedded human thyroid gland tissue with Rabbit anti-PAX8 antibody (ER1802-51) at 1/400 dilution.

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 (ER1802-51) at 1/400 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.

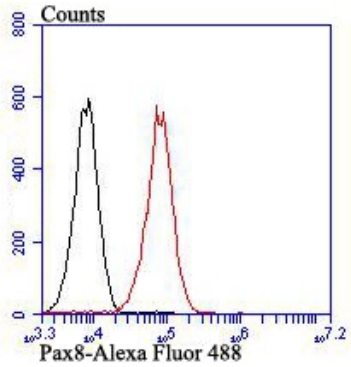

Fig4: Flow cytometric analysis of SiHa cells with Pax8 antibody at 1/100 dilution (red) compared with an unlabelled control (cells without incubation with primary antibody; black). Alexa Fluor 488-conjugated goat anti-rabbit IgG was used as the secondary antibody.

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) .