PRODUCT INFORMATION

Product name： PAX8 antibody

Product type： Primary antibodies

Description： Rabbit polyclonal to PAX8

Immunogen： 3 synthetic peptides (human) conjugated to KLH

Reacts with： Hu, Ms

Tested applications： ELISA, WB and IF

GENE INFORMATION

Gene Symbol： PAX8

Gene Name： paired box 8

Ensembl ID： ENSG00000125618

Entrez GeneID： 7849

GenBank Accession number： X69699.1

Omim ID： 167415

Swiss-Prot： Q06710

Molecular weight of PAX8： 29.083kDa

Function： Transcription factor for the thyroid-specific expression of the genes exclusively expressed in the thyroid cell type, maintaining the functional differentiation of such cells.

Expected subcellular localization： nucleus.

Expected tissue specificity： Expressed in the excretory system, thyroid gland and Wilms tumors.

Involvement in disease： Defects in PAX8 are the cause of congenital hypothyroidism non-goitrous type 2 (CHNG2) [MIM:218700]. CHNG2 is a disease characterized by thyroid dysgenesis, the most frequent cause of congenital hypothyroidism, accounting for 85% of case. The thyroid gland can be completely absent (athyreosis), ectopically located and/or severely hypoplastic. Ectopic thyroid gland is the most frequent malformation, with thyroid tissue being found most often at the base of the tongue.

Summary： This gene encodes a member of the paired box (PAX) family of transcription factors. Members of thes gene family typically encode proteins that contain a paired box domain, an octapeptide, and a paired-type homeodomain. This nuclear protein is involved in thyroid follicular cell development and expression of thyroid-specific genes. Mutations in this gene have been associated with thyroid dysgenesis, thyroid follicular carcinomas and atypical follicular thyroid

adenomas. Alternateively spliced transcript variants encoding different isoforms have been described. [provided by RefSeq]

APPLICATION NOTE

Recommended dilution：

- **ELISA: Antibody specificity was verified by direct ELISA against the 3 immunogen peptides. A titer of 1/60000 has been determined. Appropriate specificity controls were run.**
- **WB: 1/5000.**
- **IF: 1/1000.**

Optimal dilutions/concentration should be determined by the end user.

Raised in： Rabbit

Clonality： Polyclonal

Isotype： IgG

Purity： Purified Antibody

Storage buffer： 0.5 X PBS, containing a final concentration of 50% Glycerol, 0.1% BSA and 0.01% Thimerosal.

Form：Liquid

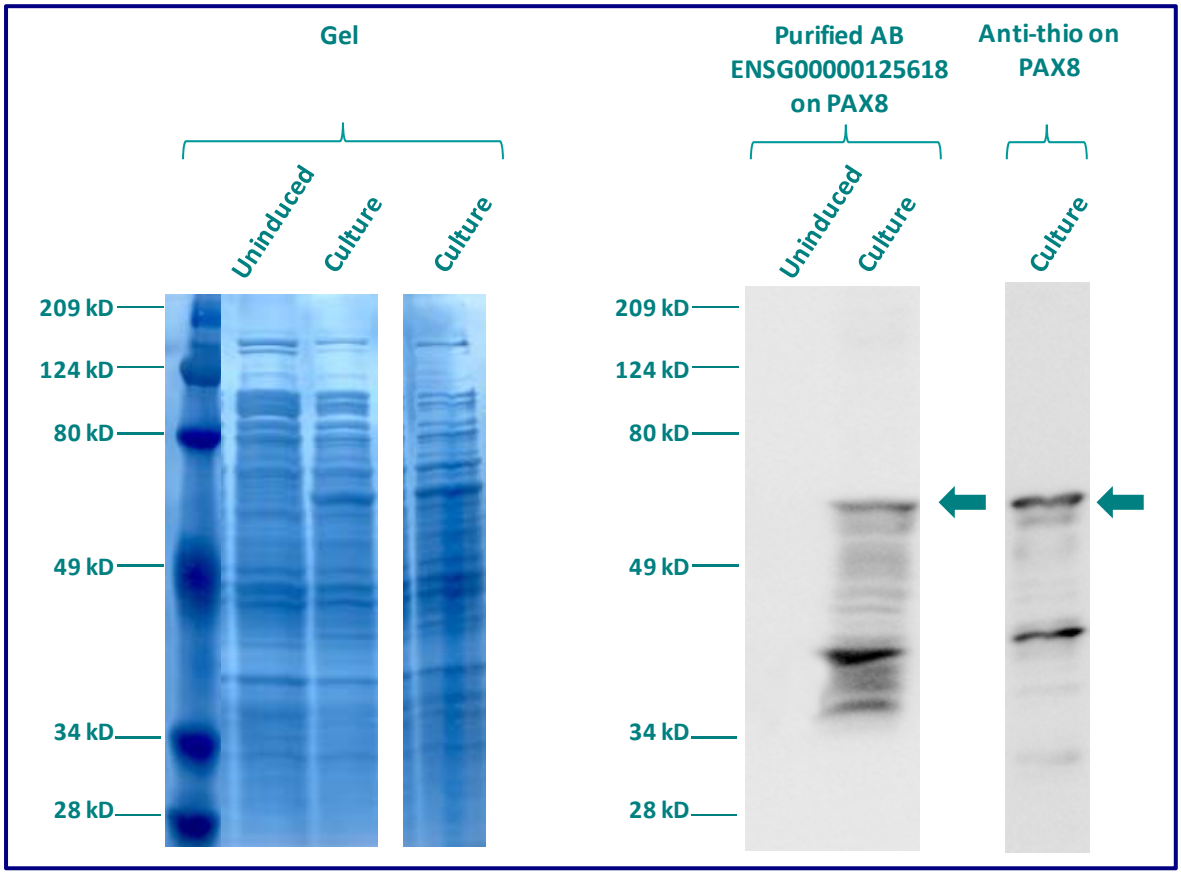
Storage instruction： Store at -20°C or -80°C. Avoid repeated freeze / thaw cycles.

WESTERN BLOT ON RECOMBINANT PROTEIN

The purified antibody ENSG00000125618 has been tested at 1/5000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells).

An anti-Thio (positive control) has been tested at 1/5000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells) as a positive control.

Plasmid name： pBAD-DEST49.
Molecular weight of PAX8：62.2kDa (48.2kDa + another 14kDa for the tag).



Gel concentration: 10%
Blocking: in 5% non-fat milk-PBST solution
1st Antibody: The antibodies are diluted in blocking buffer.

- **Dilute the purified antibody ENSG00000125618 at 1:5000**
- **Dilute the anti-thio at 1:5000**

60 minutes of incubation
2nd Antibody: The antibody is diluted in blocking buffer.

- **Dilute the anti-Rabbit IgG HRP conjugated at 1/10000**

60 minutes of incubation

IMMUNOFLUORESCENCE ANALYSIS

Immunofluorescence analysis of Paired box protein Pax-8 (PAX8) expression in 6 cells lines (HELA, 293T/17, Capan-2, SAOS2, SH-SY5Y, Skin 3,44). The purified Antibody ENSG00000125618 has been tested at 1/5000.

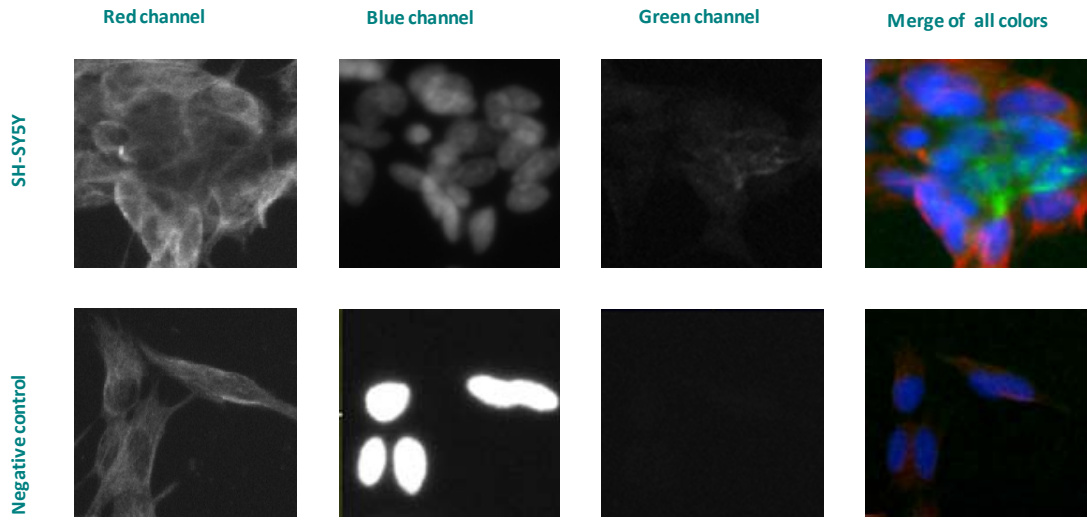
Red staining : cytoskeleton (microtubules/α-tubuline)

Blue staining : nucleus (Hoechst)

Green staining : anti- PAX8 antibody (purified)

Expected subcellular location : Nucleus

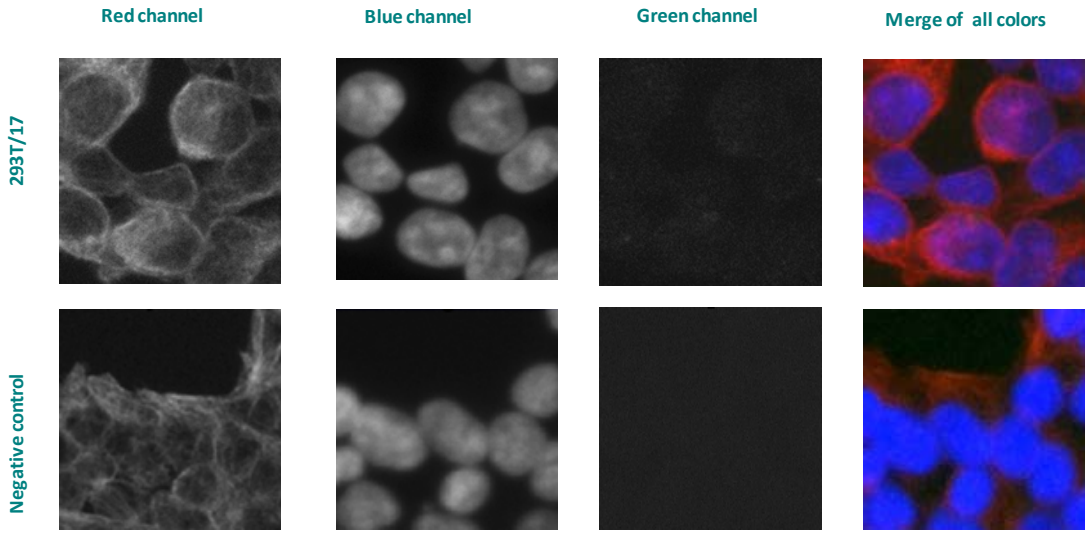
Expected tissue specificity : Expressed in the excretory system, thyroid gland and Wilms tumors



The different images obtained by double labeling immunofluorescence microscopy of SH-SY5Y (neuroblastoma) cell line shows that PAX8 is a nuclear and/or cytoplasmic protein detected in this cellular tissue .

Pictures are compared with a negative control from the same cell line without primary Ab.

Cell line Skin 3.44 tested , shows a positive result with the same distribution



The different images obtained by double labeling immunofluorescence microscopy of 293T/17 (kidney embrionic) cell line shows that PAX8 is not detected in this cellular tissue under these conditions.

Pictures are compared with a negative control from the same cell line without primary Ab.

Remaining cell lines tested gave a negative result under these conditions