

## PRODUCT INFORMATION

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**Product name :** PAX5 antibody

**Product type :** Primary antibodies

**Description :** Mouse monoclonal to PAX5

**Immunogen :** 1 synthetic peptide (human) conjugated to KLH

**Reacts with :** Hu, Ms

**Tested applications :** ELISA, WB & IF

## GENE INFORMATION

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**Gene Symbol :** PAX5

**Gene Name :** paired box 5

**Ensembl ID :** ENSG00000196092

**Entrez GeneID :** 5079

**Swiss-Prot :** Q02548

**Molecular weight :** 31.8, 32.5, 35.3, 38.8, 38.9 & 42.1kDa

**Function :** May play an important role in B-cell differentiation as well as neural development and spermatogenesis. Involved in the regulation of the CD19 gene, a B-lymphoid-specific target gene.

**Expected subcellular localization :** Nucleus.

**Summary :** This gene encodes a member of the paired box (PAX) family of transcription factors. The central feature of this gene family is a novel, highly conserved DNA-binding motif, known as the paired box. PAX proteins are important regulators in early development, and alterations in the expression of their genes are thought to contribute to neoplastic transformation. This gene encodes the B-cell lineage specific activator protein that is expressed at early, but not late stages of B-cell differentiation. Its expression has also been detected in developing CNS and testis and so the encoded protein may also play a role in neural development and spermatogenesis. This gene is located at 9p13, which is involved in t(9;14)(p13;q32) translocations recurring in small lymphocytic lymphomas of the plasmacytoid subtype, and in derived large-cell lymphomas. This translocation brings the potent E-mu enhancer of the IgH gene into close proximity of the PAX5 promoter, suggesting that the deregulation of transcription of this gene contributes to the pathogenesis of these lymphomas. Alternatively spliced transcript variants encoding different isoforms have been described but their biological validity has not been determined. [provided by RefSeq, Jul 2008].

## **APPLICATION NOTE**

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### **Recommended dilution :**

- **ELISA:** Antibody specificity was verified by direct ELISA against the 1 immunogen peptide. A titer of 21000 has been determined. Appropriate specificity controls were run.
- **WB:** Dilution 1/10000
- **IF:** Dilution 1/500

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

**Raised in :** Mouse

**Clonality :** Monoclonal

**Isotype :** IgG

**Purity :** Purified Antibody

**Storage buffer :** Containing a final concentration of PBS/glycerol (V/V), 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

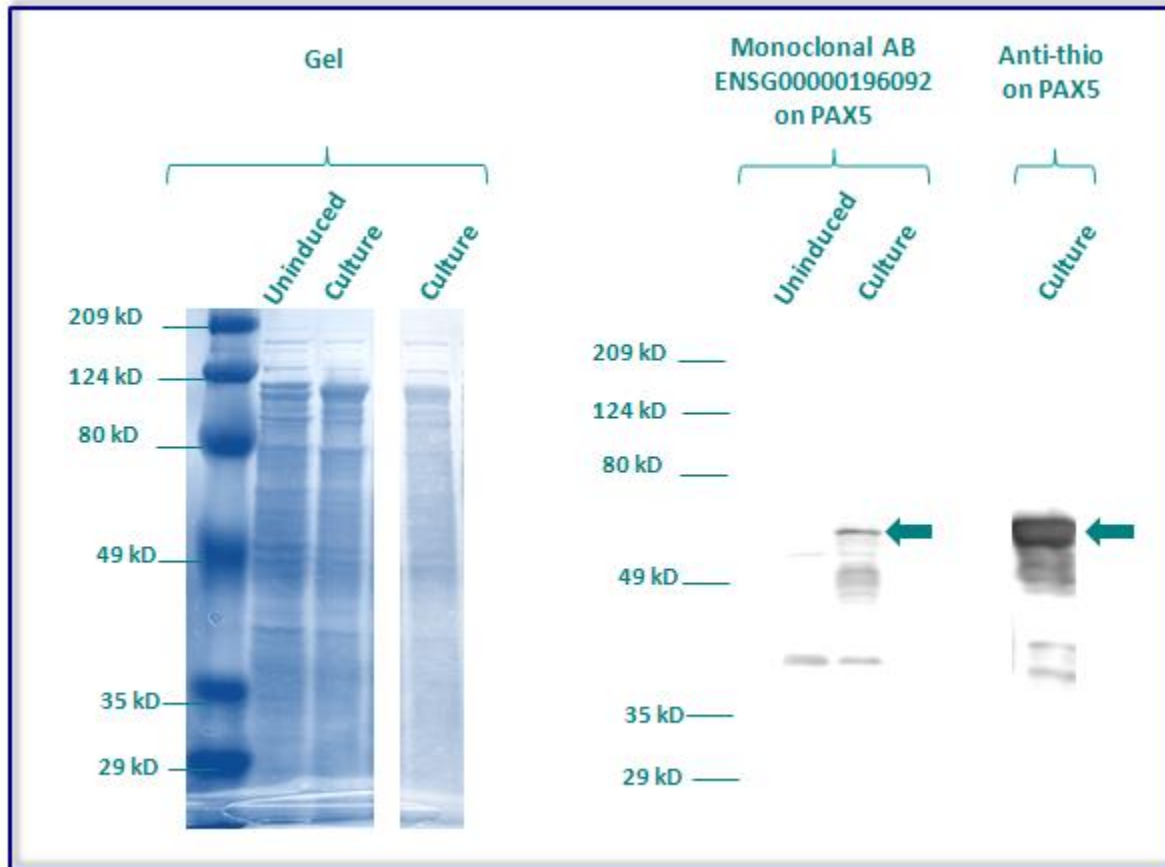
The monoclonal purified antibody ENSG00000196092 has tested at 1/10000 on uninduced (negative control) and induced culture of E.coli (one shot Top10 competent cells).

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

Clone : 7D5F5B7, Isotype : G1; M; kappa

Plasmid name : pBAD-DEST49.

Molecular weight of PAX5 : 56kDa (42kDa + another 14kDa for the tag).



**NOTE:** THE PURIFIED MONOCLONAL ANTIBODY DOES NOT DETECT THE PROTEIN IN THE FOLLOWING CELL LYSATES (HeLa, SAOS 2, SH-SY5Y, SKIN 3.44 & 293T17) AT A DILUTION OF 1:250.

Gel concentration: 10%

Blocking: in 5% non-fat milk-PBST solution

1<sup>st</sup> Antibody: The antibodies are diluted in blocking buffer.

- Dilute the purified antibody ENSG00000196092 at 1:10000
- Dilute the anti-thio at 1:5000

60 minutes of incubation

2<sup>nd</sup> Antibody: The antibody is diluted in blocking buffer.

- Dilute the anti-Mouse IgG HRP conjugated at 1/10000

60 minutes of incubation

## IMMUNOFLUORESCENCE ANALYSIS

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Immunofluorescence analysis of Paired box protein Pax-5 (PAX5) expression in 6 cells lines (HELA, 293T/17, Capan-2, SAOS-2, SH-SY5Y, Skin 3,44). The monoclonal antibody ENSG00000196092 has been tested at 1/500.

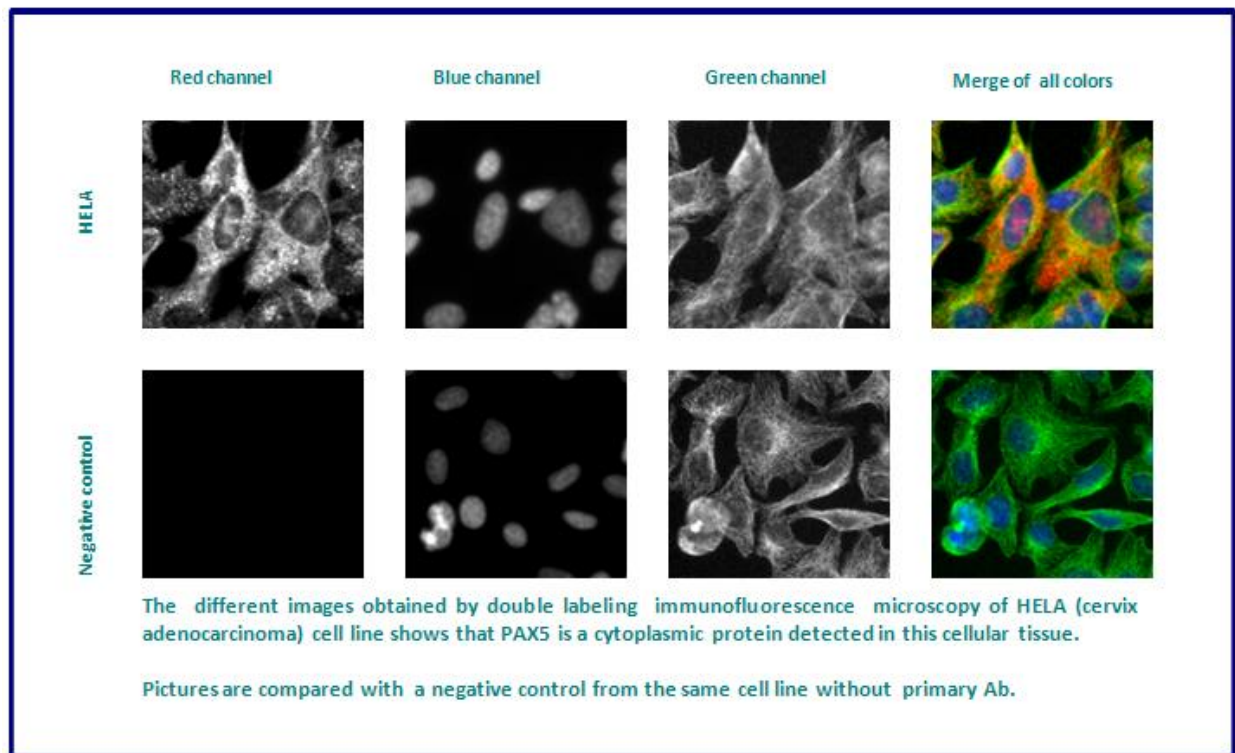
**Green staining :** cytoskeleton (microtubules/ $\alpha$ -tubuline)

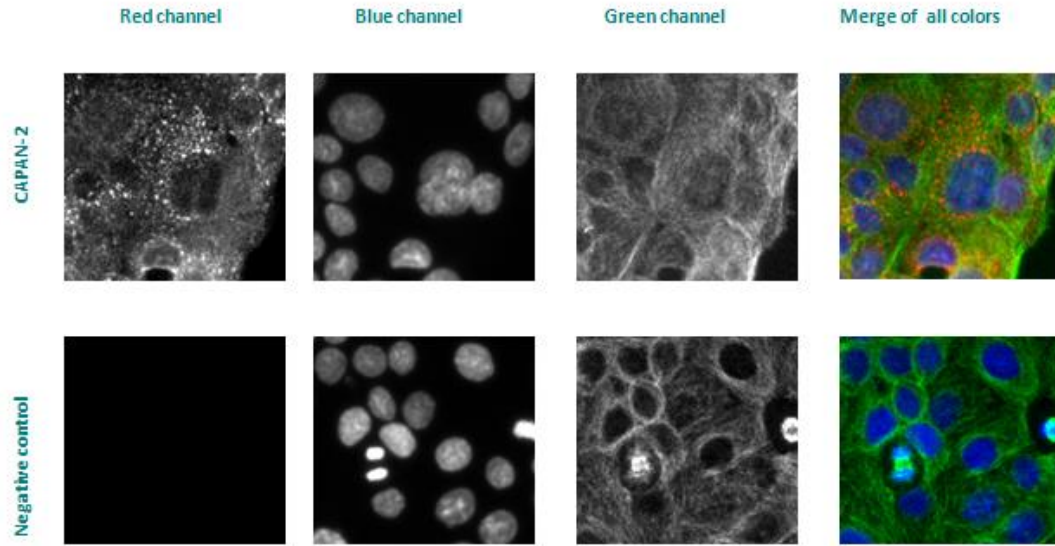
**Blue staining :** nucleus (Hoechst)

**Red staining :** anti- PAX5 antibody (purified)

**Expected subcellular location :** Nucleus

**Expected tissue specificity :** Expressed at early B-cell differentiation, in the developing CNS and in adult testis





The different images obtained by double labeling immunofluorescence microscopy of CAPAN- 2 (Pancreas adenocarcinoma) cell line shows that PAX5 is a cytoplasmic protein detected in this cellular tissue.

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

Remaining cell lines tested gave a positive result with a cytoplasmic and nuclear distribution.