

Store at  
-20C  
#12412**PAX3 Antibody**

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|                           |                         |   |                        |                                  |                               |                                |
|---------------------------|-------------------------|---|------------------------|----------------------------------|-------------------------------|--------------------------------|
| <b>Applications:</b><br>W | <b>Reactivity:</b><br>H | <b>Sensitivity:</b><br>Transfected Only | <b>MW (kDa):</b><br>62 | <b>Source/Isotype:</b><br>Rabbit | <b>UniProt ID:</b><br>#P23760 | <b>Entrez-Gene Id:</b><br>5077 |
|---------------------------|-------------------------|---|------------------------|----------------------------------|-------------------------------|--------------------------------|

**Product Usage Information****Application**

Western Blotting

**Dilution**

1:1000

**Storage**

Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/ml BSA and 50% glycerol. Store at -20°C. Do not aliquot the antibody.

**Specificity/Sensitivity**

PAX3 Antibody recognizes transfected levels of total PAX3 protein.

**Species predicted to react based on 100% sequence homology**

Mouse, Rat, Monkey

**Source / Purification**

Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human PAX3 protein. Antibodies are purified by protein A and peptide affinity chromatography.

**Background**

Paired box (PAX) proteins are a family of transcription factors that play important and diverse roles in animal development (1). Nine PAX proteins (PAX1-9) have been described in humans and other mammals. They are defined by the presence of an amino-terminal "paired" domain, consisting of two helix-turn-helix motifs, with DNA binding activity (2). PAX proteins are classified into four structurally distinct subgroups (I-IV) based on the absence or presence of a carboxy-terminal homeodomain and a central octapeptide region. Subgroup I (PAX1 and 9) contains the octapeptide but lacks the homeodomain; subgroup II (PAX2, 5, and 8) contains the octapeptide and a truncated homeodomain; subgroup III (PAX3 and 7) contains the octapeptide and a complete homeodomain; and subgroup IV (PAX4 and 6) contains a complete homeodomain but lacks the octapeptide region (2). PAX proteins play critically important roles in development by regulating transcriptional networks responsible for embryonic patterning and organogenesis (3); a subset of PAX proteins also maintain functional importance during postnatal development (4). Research studies have implicated genetic mutations that result in aberrant expression of PAX genes in a number of cancer subtypes (1-3), with members of subgroups II and III identified as potential mediators of tumor progression (2).

**Background References**

- Lang, D. et al. (2007) *Biochem Pharmacol* 73, 1-14.
- Robson, E.J. et al. (2006) *Nat Rev Cancer* 6, 52-62.
- Wang, Q. et al. (2008) *J Cell Mol Med* 12, 2281-94.
- Blake, J.A. et al. (2008) *Dev Dyn* 237, 2791-803.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Western Blot Buffer**

**IMPORTANT:** For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.

**Applications Key**

**W:** Western Blotting

**Cross-Reactivity Key**

**H:** Human

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