

# Rabbit Anti-PAX3 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)

Catalog # AP52171

## Product Information

---

<b>Application</b>	WB, IHC-P, IHC-F, IF, E
<b>Primary Accession</b>	<a href="#">P24610</a>
<b>Reactivity</b>	Human, Mouse, Rat
<b>Host</b>	Rabbit
<b>Clonality</b>	Polyclonal
<b>Calculated MW</b>	52949
<b>Physical State</b>	Liquid
<b>Immunogen</b>	KLH conjugated synthetic peptide derived from human PAX3
<b>Epitope Specificity</b>	151-250/479
<b>Isotype</b>	IgG
<b>Purity</b>	affinity purified by Protein A
<b>Buffer</b>	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
<b>SUBCELLULAR LOCATION</b>	Nucleus.
<b>SIMILARITY</b>	Belongs to the paired homeobox family. Contains 1 homeobox DNA-binding domain. Contains 1 paired domain.
<b>SUBUNIT</b>	Can bind to DNA as a homodimer or a heterodimer with PAX7. Interacts with PAXBP1; the interaction links PAX3 to a WDR5-containing histone methyltransferase complex. Interacts with DAXX.
<b>DISEASE</b>	<p>Waardenburg syndrome 1 (WS1) [MIM:193500]: WS1 is an autosomal dominant disorder characterized by non-progressive sensorineural deafness, pigmentary disturbances such as frontal white blaze of hair, heterochromia of irides, white eyelashes, leukoderma, and wide bridge of nose owing to lateral displacement of the inner canthus of each eye (dystopia canthorum). WS1 shows variable clinical expression and some affected individuals do not manifest hearing impairment or iris pigmentation disturbances. Dystopia canthorum is the most consistent sign and is found in 98% of the patients. Note=The disease is caused by mutations affecting the gene represented in this entry. Waardenburg syndrome 3 (WS3) [MIM:148820]: WS3 is an autosomal dominant disorder characterized by sensorineural deafness, pigmentary disturbances, dystopia canthorum and limb anomalies such as hypoplasia of the musculoskeletal system, flexion contractures, fusion of the carpal bones, syndactylies. Note=The disease is caused by mutations affecting the gene represented in this entry. Craniofacial-deafness-hand syndrome (CDHS) [MIM:122880]: Thought to be an autosomal dominant disease which comprises absence or hypoplasia of the nasal bones, hypoplastic maxilla, small and short nose with thin nares, limited movement of the wrist, short palpebral fissures, ulnar deviation of the fingers, hypertelorism and profound sensory-neural deafness. Note=The disease is caused by mutations affecting the gene represented in this entry. Rhabdomyosarcoma 2 (RMS2) [MIM:268220]: A form of rhabdomyosarcoma, a highly malignant tumor of striated muscle derived from primitive mesenchymal cells and exhibiting differentiation along rhabdomyoblastic lines. Rhabdomyosarcoma is one of the most frequently occurring soft tissue sarcomas and the most common in</p>

children. It occurs in four forms: alveolar, pleomorphic, embryonal and botryoidal rhabdomyosarcomas. Note=The gene represented in this entry is involved in disease pathogenesis. A chromosomal aberration involving PAX3 is found in rhabdomyosarcoma. Translocation (2;13)(q35;q14) with FOXO1. The resulting protein is a transcriptional activator. Note=A chromosomal aberration involving PAX3 is a cause of rhabdomyosarcoma. Translocation t(2;2)(q35;p23) with NCOA1 generates the NCOA1-PAX3 oncogene consisting of the N-terminus part of PAX3 and the C-terminus part of NCOA1. The fusion protein acts as a transcriptional activator. Rhabdomyosarcoma is the most common soft tissue carcinoma in childhood, representing 5-8% of all malignancies in children.

#### Important Note

This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.

#### Background Descriptions

This protein is a member of the paired box (PAX) family of transcription factors. Members of the PAX family typically contain a paired box domain and a paired-type homeodomain. These proteins play critical roles during fetal development. Mutations in paired box gene 3 are associated with Waardenburg syndrome, craniofacial-deafness-hand syndrome, and alveolar rhabdomyosarcoma. The translocation t(2;13)(q35;q14), which represents a fusion between PAX3 and the forkhead gene, is a frequent finding in alveolar rhabdomyosarcoma. Alternative splicing results in transcripts encoding isoforms with different C-termini.

## Additional Information

---

Gene ID	18505
Other Names	Sp; Pax-3; splotch; Paired box protein Pax-3; Pax3
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,ELISA=1:5000-10000
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glycerol
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

## Protein Information

---

Name	Pax3
Synonyms	Pax-3
Function	Transcription factor that may regulate cell proliferation, migration and apoptosis. Involved in neural development and myogenesis. Transcriptional activator of MITF, acting synergistically with SOX10 (By similarity).
Cellular Location	Nucleus {ECO:0000250 UniProtKB:P23760}.

## Background

---

Transcription factor that may regulate cell proliferation, migration and apoptosis. Involved in neural development and myogenesis.

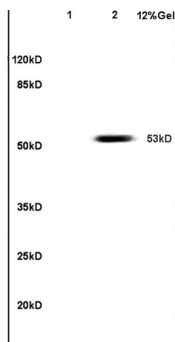
## References

---

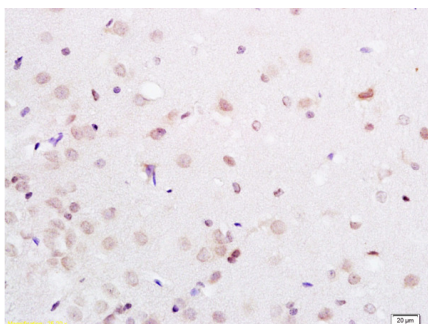
Goulding M.D.,et al.EMBO J. 10:1135-1147(1991).  
Carninci P.,et al.Science 309:1559-1563(2005).  
Epstein D.J.,et al.Cell 67:767-774(1991).  
Diao Y.,et al.Cell Stem Cell 11:231-241(2012).  
Vogan K.J.,et al.Genomics 17:364-369(1993).

## Images

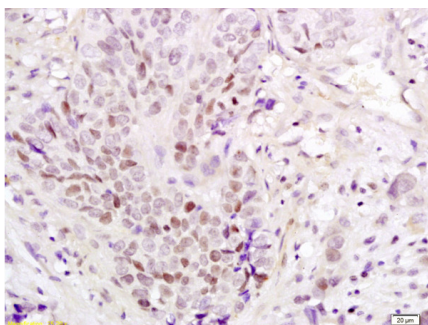
---



Lane 1: mouse embryo lysates Lane 2: human colon carcinoma lysates probed with Anti PAX3 Polyclonal Antibody, Unconjugated (AP52171) at 1:200 in 4C. Followed by conjugation to secondary antibody at 1:3000 90min in 37C. Predicted band 53kD. Observed band size: 53kD



Formalin-fixed and paraffin embedded rat brain labeled with Anti-PAX3 Polyclonal Antibody, Unconjugated(AP52171) at 1:200 followed by conjugation to the secondary antibody and DAB staining



Formalin-fixed and paraffin embedded human esophageal carcinoma labeled with Anti-PAX3 Polyclonal Antibody, Unconjugated(AP52171) at 1:200 followed by conjugation to the secondary antibody and DAB staining

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.