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Phospho-OCT4(S236) Antibody

Affinity Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP3724a

Product Information

Application	DB, E
Primary Accession	Q01860
Other Accession	Q9TSV5, P20263, O97552, Q06416
Reactivity	Human
Predicted	Bovine, Mouse, Pig
Host	Rabbit
Clonality	Polyclonal
Isotype	Rabbit IgG
Clone Names	RB22304
Calculated MW	38571

Additional Information

Gene ID	5460
Other Names	POU domain, class 5, transcription factor 1, Octamer-binding protein 3, Oct-3, Octamer-binding protein 4, Oct-4, Octamer-binding transcription factor 3, OTF-3, POU5F1, OCT3, OCT4, OTF3
Target/Specificity	This OCT4 Antibody is generated from rabbits immunized with a KLH conjugated synthetic phosphopeptide corresponding to amino acid residues surrounding S236 of human OCT4.
Dilution	DB~~1:500 E~~Use at an assay dependent concentration.
Format	Purified polyclonal antibody supplied in PBS with 0.09% (W/V) sodium azide. This antibody is purified through a protein A column, followed by peptide affinity purification.
Storage	Maintain refrigerated at 2-8°C for up to 2 weeks. For long term storage store at -20°C in small aliquots to prevent freeze-thaw cycles.
Precautions	Phospho-OCT4(S236) Antibody is for research use only and not for use in diagnostic or therapeutic procedures.

Protein Information

Name	POU5F1
Synonyms	OCT3, OCT4, OTF3

Function	Transcription factor that binds to the octamer motif (5'- ATTTGCAT-3'). Forms a trimeric complex with SOX2 or SOX15 on DNA and controls the expression of a number of genes involved in embryonic development such as YES1, FGF4, UTF1 and ZFP206. Critical for early embryogenesis and for embryonic stem cell pluripotency.
Cellular Location	Cytoplasm. Nucleus. Note=Expressed in a diffuse and slightly punctuate pattern. Colocalizes with MAPK8 and MAPK9 in the nucleus. {ECO:0000250|UniProtKB:P20263, ECO:0000269|PubMed:18191611, ECO:0000269|PubMed:19274063, ECO:0000269|PubMed:23024368}
Tissue Location	Expressed in developing brain. Highest levels found in specific cell layers of the cortex, the olfactory bulb, the hippocampus and the cerebellum. Low levels of expression in adult tissues.

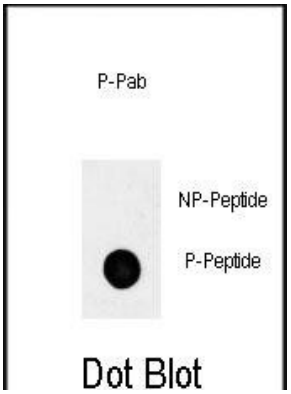
Background

OCT4 encodes a transcription factor containing a POU homeodomain. This transcription factor plays a role in embryonic development, especially during early embryogenesis, and it is necessary for embryonic stem cell pluripotency. A translocation of this gene with the Ewing's sarcoma gene, t(6;22)(p21;q12), has been linked to tumor formation. Alternative splicing, as well as usage of alternative translation initiation codons, results in multiple isoforms, one of which initiates at a non-AUG (CUG) start codon. Related pseudogenes have been identified on chromosomes 1, 3, 8, 10, and 12.

References

Narwani, K., et al. In Vitro Cell. Dev. Biol. Anim. 46 (3-4), 309-316 (2010)
Raya, A., et al. Nat Protoc 5(4):647-660(2010)
Firth, A.L., et al. Am. J. Physiol. Lung Cell Mol. Physiol. 298 (4), L548-L557 (2010)

Images



Dot blot analysis of anti-phospho-OCT4-S236 Phospho-specific Pab (Cat. #AP3724a) on nitrocellulose membrane. 50ng of Phospho-peptide or Non Phospho-peptide per dot were adsorbed. Antibody working concentrations are 0.5ug per ml.