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EMX2 Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP54541

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC, E
Primary Accession	Q04743
Reactivity	Rat, Dog
Host	Rabbit
Clonality	Polyclonal
Calculated MW	28303
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human EMX2
Epitope Specificity	151-250/252
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SUBCELLULAR LOCATION	Nucleus.
SIMILARITY	Belongs to the EMX homeobox family. Contains 1 homeobox DNA-binding domain.
DISEASE	Defects in EMX2 are the cause of schizencephaly (SCHZC) [MIM:269160]. Schizencephaly is an extremely rare human congenital disorder characterized by a full-thickness cleft within the cerebral hemispheres. These clefts are lined with gray matter and most commonly involve the parasylvian regions. Large portions of the cerebral hemispheres may be absent and replaced by cerebro-spinal fluid.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Emx1 and Emx2 are human homologs to the Drosophila developmental genes empty spiracles expressed in anterior body regions during early Drosophila embryogenesis. Emx1 and Emx2 are homeobox proteins expressed in the developing vertebrate brain. Emx2 is expressed in the dorsal telencephalon and small diencephalic regions, while Emx1 expression is exclusively confined to pyramidal neurons of the dorsal telencephalon. In the embryonic brain, Emx1 is expressed in both proliferating and differentiating neurons while Emx2 is expressed only in proliferating neurons. OTX1 and OTX2 are human homologs of the Drosophila developmental genes orthodenticle. In development, the sequence of expression begins with OTX2 at day ten post coitum followed by OTX1, Emx2 and finally Emx1. The genes encoding human Emx1 and Emx2 map to chromosomes 2p13.2 and 10q26.11, respectively.

Additional Information

Gene ID	2018
Other Names	Homeobox protein EMX2, Empty spiracles homolog 2, Empty spiracles-like

	protein 2, EMX2
Target/Specificity	Cerebral cortex.
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=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% Glyce
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	EMX2
Function	Transcription factor, which in cooperation with EMX1, acts to generate the boundary between the roof and archipallium in the developing brain. May function in combination with OTX1/2 to specify cell fates in the developing central nervous system. In the inner ear, it controls the distribution of GPR156 at hair cell boundaries, and regulates the organization of stereociliary bundles in opposite orientations across the line of polarity reversal (LPR).
Cellular Location	Nucleus {ECO:0000250|UniProtKB:Q04744}. Cell projection, axon {ECO:0000250|UniProtKB:Q04744}. Note=Detected in axons within the olfactory mucosa and glomeruli in the olfactory bulb {ECO:0000250|UniProtKB:Q04744}
Tissue Location	Cerebral cortex.