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ODCp Polyclonal Antibody

Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56446

Product Information

Application	WB, IHC-P, IHC-F, IF, ICC
Primary Accession	Q96A70
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	49980
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human ODCp
Epitope Specificity	51-150/460
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 Orn/Lys/Arg decarboxylase class-II family.
SUBUNIT	Interacts with OAZ1, OAZ2 and OAZ3; the interactions stabilize the complex by inhibiting AZIN2 ubiquitination and degradation. Does not form an heterodimer with ODC1 (By similarity). Monomer. Interaction with OAZ1, OAZ2 and OAZ3; the interactions lead to increased ornithine decarboxylase (ODC)activity and decreased rate of ODC1 degradation.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	ODCp is a 460 amino acid protein that is expressed in brain and testis. ODCp is a member of the Orn/Lys/Arg decarboxylase class-II family that catalyzes the creation of CO2 and agmatine from L-arginine. Mammalian ODCp differs from the forms expressed in bacteria and plants and shares less than 50% homology with Ornithine decarboxylase (ODC). ODCp is associated with the mitochondrial membrane where excess agmatine can be degraded by the enzyme Agmatinase or bound by the imidazoline recepto. In the brain, the highest levels of ODCp are found in the hypothalamus. Mammalian ODCp is thermally unstable and can be inhibited by Ca2+, Co2+ and polyamines.

Additional Information

Gene ID	113451
Other Names	Antizyme inhibitor 2, AzI2, Arginine decarboxylase, ADC, ARGDC, Ornithine decarboxylase-like protein, ODC-like protein, ornithine decarboxylase paralog, ODC-p, AZIN2, ADC, KIAA1945, ODCP
Target/Specificity	Highly expressed in brain. Also expressed in testis.

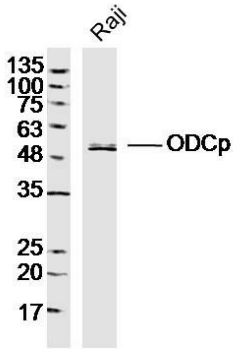
Dilution	WB=1:500-2000,IHC-P=1:100-500,IHC-F=1:100-500,ICC=1:100-500,IF=1:100-500
Format	0.01M TBS(pH7.4) with 1% BSA, 0.09% (W/V) sodium azide and 50% Glyce
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

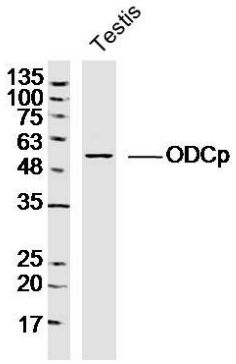
Protein Information

Name	AZIN2
Synonyms	ADC, KIAA1945, ODCP
Function	Antizyme inhibitor (AZI) protein that positively regulates ornithine decarboxylase (ODC) activity and polyamine uptake. AZI is an enzymatically inactive ODC homolog that counteracts the negative effect of ODC antizymes (AZs) OAZ1, OAZ2 and OAZ3 on ODC activity by competing with ODC for antizyme-binding (PubMed:17900240). Inhibits antizyme- dependent ODC degradation and releases ODC monomers from their inactive complex with antizymes, leading to formation of the catalytically active ODC homodimer and restoring polyamine production (PubMed:17900240). Participates in the morphological integrity of the trans-Golgi network (TGN) and functions as a regulator of intracellular secretory vesicle trafficking (PubMed:20188728).
Cellular Location	Nucleus. Cytoplasm. Cytoplasm, perinuclear region. Membrane. Cytoplasmic vesicle Endoplasmic reticulum-Golgi intermediate compartment Golgi apparatus, cis-Golgi network. Golgi apparatus, trans-Golgi network. Cytoplasmic granule. Cell projection, axon. Cell projection, dendrite. Perikaryon. Note=Colocalizes with KDEL receptors in ER-Golgi intermediate compartment (ERGIC). Translocates from the ERGIC structure to the cytoplasm in an antizyme-dependent manner Localizes with vesicle-associated membrane protein VAMP8 in the vicinity of the plasma membrane within serotonin-containing secretory granules (By similarity). Detected as vesicle-like pattern in neurite outgrowths. Localizes to the vesicular compartments of the secretory pathway, predominantly in the trans-Golgi network (TGN). Localizes with vesicle-associated membrane protein VAMP8 in the vicinity of the plasma membrane within serotonin-containing secretory granules.
Tissue Location	Expressed in the neocortex, thalamus, hippocampus, cerebellum, medulla oblongata, gray and white matter. Expressed in neurons, oligodendrocytes, basket, Purkinje and pyramidal cells Expressed in spermatocytes and Leydig cells of the testis. Expressed in luteal theca cells lining corpus luteum cysts and in hilus cells of the ovary. Expressed in primary and neoplastic mast cells (MC) (at protein level). Highly expressed in brain. Also expressed in testis

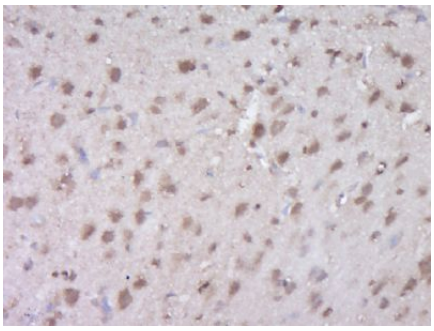
Images

Sample: Raji (Human)Cell Lysate at 40 ug
Primary: Anti-ODCp(AP56446)at 1/300 dilution
Secondary: IRDye800CW Goat Anti-RabbitIgG at 1/20000 dilution
Predicted band size: 50kD
Observed band size: 50kD





Sample: Testis (Mouse)Lysate at 40 ug
Primary: Anti-ODCp(AP56446)at 1/300 dilution
Secondary: IRDye800CW Goat Anti-RabbitIgG at 1/20000 dilution
Predicted band size: 50kD
Observed band size: 50kD



Paraformaldehyde-fixed, paraffin embedded (Rat brain); Antigen retrieval by boiling in sodium citrate buffer (pH6.0) for 15min; Block endogenous peroxidase by 3% hydrogen peroxide for 20 minutes; Blocking buffer (normal goat serum) at 37°C for 30min; Antibody incubation with (ODCp) Polyclonal Antibody, Unconjugated (AP56446) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.