

ODCp Polyclonal Antibody
Purified Rabbit Polyclonal Antibody (Pab)
Catalog # AP56446**Specification****ODCp Polyclonal Antibody - Product Information**

Application	WB, IHC-P, IHC-F, IF, ICC
Primary Accession	Q96A70
Reactivity	Rat, Pig, Dog, Bovine
Host	Rabbit
Clonality	Polyclonal
Calculated MW	50 KDa
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.

ODCp Polyclonal Antibody - Additional Information

Gene ID 113451**Other Names**

Antizyme inhibitor 2, Azl2, 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~1:1000
IHC-P~N/A
IHC-F~N/A
IF~1:50~200
ICC~N/A

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.

ODCp Polyclonal Antibody - 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

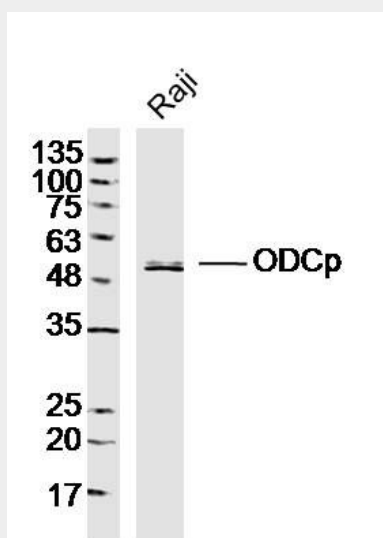
corpus luteum cysts and in hilus cells of the ovary. Expressed in primary and neoplastic mast cells (MC) (at protein level). Highly expressed in brain. Also expressed in testis

ODCp Polyclonal Antibody - Protocols

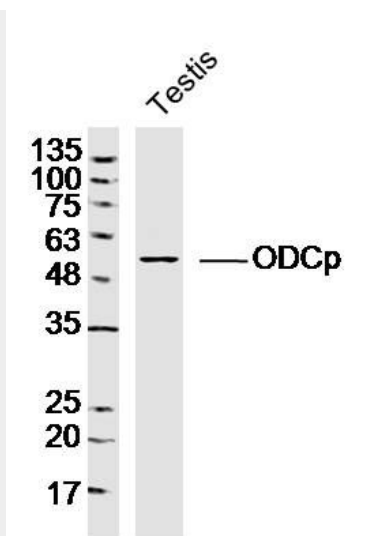
Provided below are standard protocols that you may find useful for product applications.

- [Western Blot](#)
- [Blocking Peptides](#)
- [Dot Blot](#)
- [Immunohistochemistry](#)
- [Immunofluorescence](#)
- [Immunoprecipitation](#)
- [Flow Cytometry](#)
- [Cell Culture](#)

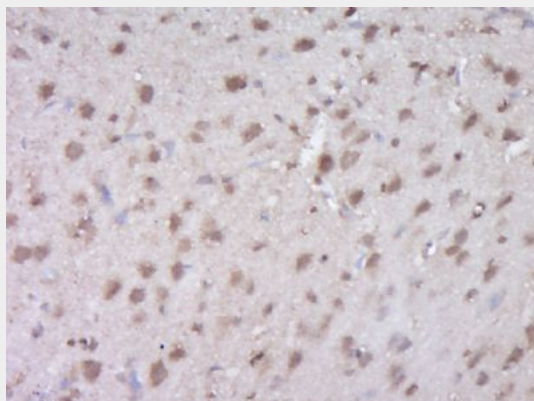
ODCp Polyclonal Antibody - Images



Sample: Raji (Human) Cell Lysate at 40 ug
Primary: Anti-ODCp(bs-16872R) at 1/300 dilution
Secondary: IRDye800CW Goat Anti-Rabbit IgG at 1/20000 dilution
Predicted band size: 50kD
Observed band size: 50kD



Sample: Testis (Mouse)Lysate at 40 ug
Primary: Anti-ODCp(bs-16872R)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 (bs-16872R) at 1:400 overnight at 4°C, followed by operating according to SP Kit(Rabbit) (sp-0023) instructions and DAB staining.