

## Basic Information

<b>Product Name</b>	Anti-PRKG1 Antibody (Clone#OTI9G4)		
<b>Gene Name</b>	PRKG1		
<b>Source</b>	Mouse		
<b>Clonality</b>	Monoclonal		
<b>Isotype</b>	IgG1		
<b>Species Reactivity</b>	human, mouse, rat		
<b>Tested Application</b>	WB, IHC, ICC/IF		
<b>Contents</b>	PBS (pH 7.3) containing 1% BSA, 50% glycerol and 0.02% sodium azide.		
<b>Immunogen</b>	Full length human recombinant protein of human PRKG1 (NP_006249) produced in HEK293T cell.		
<b>Concentration</b>	500 ug/ml		
<b>Purification</b>	Purified from mouse ascites fluids or tissue culture supernatant by affinity chromatography (protein A/G)		
<b>Observed MW</b>	78 kDa		
<b>Dilution Ratios</b>	Western blot (WB):	1:3000	
	Immunohistochemistry (IHC):	1:50	
	Immunocytochemistry/Immunofluorescence (ICC/IF):	1:100	

## Storage

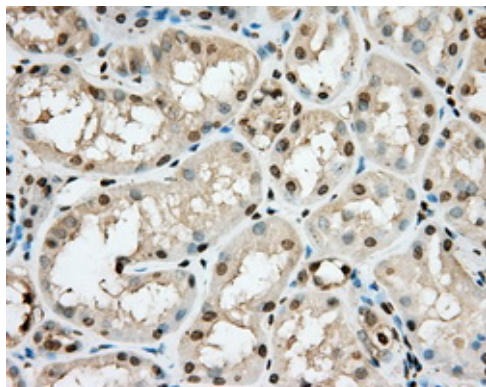
Stable for 12 months from date of receipt. Store at -20°C as received.

## Background Information

cGMP-dependent protein kinase 1, alpha isozyme is an enzyme that in humans is encoded by the PRKG1 gene. Mammals have three different isoforms of cyclic GMP-dependent protein kinase (Ialpha, Ibeta, and II). These PRKG isoforms act as key mediators of the nitric oxide/cGMP signaling pathway and are important components of many signal transduction processes in diverse cell types. This PRKG1 gene on human chromosome 10 encodes the soluble Ialpha and Ibeta isoforms of PRKG by alternative transcript splicing. A separate gene on human chromosome 4, PRKG2, encodes the membrane-bound PRKG isoform II. The PRKG1 proteins play a central role in regulating cardiovascular and neuronal functions in addition to relaxing smooth muscle tone, preventing platelet aggregation, and modulating cell growth. This gene is most strongly expressed in all types of smooth muscle, platelets, cerebellar Purkinje cells, hippocampal neurons, and the lateral amygdala. Isoforms Ialpha and Ibeta have identical cGMP-binding and catalytic domains but differ in their leucine/isoleucine zipper and autoinhibitory sequences and therefore differ in their dimerization substrates and kinase

enzyme activity.

## Selected Validation Data



Immunohistochemical staining of paraffin-embedded Kidney tissue within the normal limits using anti-PRKG1 mouse monoclonal antibody. (Heat-induced epitope retrieval by 10mM citric buffer, pH6.0, 100°C for 10min, MA01708, Dilution 1:50)