

#13511 Store at -20C

# PKG-1 $\alpha$ (D10G2) Rabbit mAb


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Applications:	Reactivity:	Sensitivity:	MW (kDa):	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
WB	H M R	Endogenous	78	Rabbit IgG	#Q13976	5592

<b>Product Usage Information</b>	<b>Application</b> Western Blotting	<b>Dilution</b> 1:1000
<b>Storage</b>	Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 $\mu$ g/ml BSA, 50% glycerol and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibody.	
<b>Specificity / Sensitivity</b>	PKG-1 $\alpha$ (D10G2) Rabbit mAb recognizes endogenous levels of total PKG-1 $\alpha$ protein. This antibody does not cross-react with PKG-1 $\beta$ .	
<b>Source / Purification</b>	Monoclonal antibody is produced by immunizing animals with a synthetic peptide corresponding to residues near the amino terminus of human PKG-1 $\alpha$ protein.	
<b>Background</b>	Cyclic GMP-dependent kinases (cGK/PKG) belong to the AGC family of serine/threonine protein kinases. In mammals, two genes encode PKG-1 and PKG-2. Alternative PKG-1 splicing yields $\alpha$ and $\beta$ isoforms, which display tissue-specific expression patterns in humans (1). All PKG family members are activated by increased cellular cGMP, which binds to the enzyme's regulatory domain inducing a conformational change and leading to enzyme activation. cGMP levels are increased through the activation of guanylyl cyclases, a process known to occur in part through nitric oxide (NO) signaling (2). In addition to well established roles in platelet activation and smooth muscle relaxation (3), PKG signaling is important in many biological processes including cardiac contractility, axon guidance, bone growth, contraction of intestinal smooth muscle, and erectile dysfunction (4).	
<b>Background References</b>	1. Orstavik, S. et al. (1997) <i>Genomics</i> 42, 311-8. 2. Friebe, A. and Koesling, D. (2003) <i>Circ Res</i> 93, 96-105. 3. Lincoln, T.M. et al. (2001) <i>J Appl Physiol</i> 91, 1421-30. 4. Hofmann, F. et al. (2006) <i>Physiol Rev</i> 86, 1-23.	

<b>Species Reactivity</b>	Species reactivity is determined by testing in at least one approved application (e.g., western blot).
<b>Western Blot Buffer</b>	IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BSA, 1X TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.
<b>Applications Key</b>	<b>WB:</b> Western Blotting
<b>Cross-Reactivity Key</b>	<b>H:</b> human <b>M:</b> mouse <b>R:</b> rat <b>Hm:</b> hamster <b>Mk:</b> monkey <b>Vir:</b> virus <b>Mi:</b> mink <b>C:</b> chicken <b>Dm:</b> D. melanogaster <b>X:</b> Xenopus <b>Z:</b> zebrafish <b>B:</b> bovine <b>Dg:</b> dog <b>Pg:</b> pig <b>Sc:</b> S. cerevisiae <b>Ce:</b> C. elegans <b>Hr:</b> horse <b>GP:</b> Guinea Pig <b>Rab:</b> rabbit <b>All:</b> all species expected
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