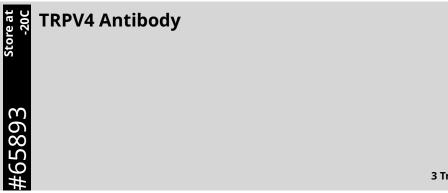
Revision	1	

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Applications: W, IP	<b>Reactivity:</b> H M Mk	<b>Sensitivity:</b> Endogenous	<b>MW (kDa):</b> 95-102	<b>Source/Isotype:</b> Rabbit	UniProt ID: #Q9HBA0	<b>Entrez-Gene Id:</b> 59341		
Product Usage Information	2	<b>Application</b> Western Blotting Immunoprecipitation			<b>Dilution</b> 1:1000 1:50			
Storage		Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 μg/ml BSA and 50% glycerol. Store at – 20°C. <i>Do not aliquot the antibody.</i>						
Specificity/Sensitivity		TRPV4 Antibody recognizes endogenous levels of total TRPV4 protein. The antibody is predicted to detect all isoforms of TRPV4 reported in Uniprot, with the exception of TRPV4-SV (Isoform 3).						
Source / Purification		Polyclonal antibodies are produced by immunizing animals with a synthetic peptide corresponding to residues near the carboxy terminus of human TRPV4 protein. Antibodies are purified by protein A and peptide affinity chromatography.						
Background		TRPV4 is a member of the transient receptor potential vanilloid (TRPV) family of ion channels, and functions as a Ca <sup>2+</sup> -permeant non-selective cation channel. TRPV4 channels are expressed in many cell types, with particular abundance in sensory and spinal neurons (1). TRPV4 channels play a role in maintaining cellular homeostasis, by facilitating transmembrane Ca <sup>2+</sup> transport in response to various stimuli, including thermal stress, fatty acid metabolites, and hypotonicity (2). Mutations in the <i>TRPV4</i> gene have consequently been attributed to a variety of pathological conditions. For example, constitutively active TRPV4 mutants can lead to excess Ca <sup>2+</sup> influx, resulting in toxicity and degeneration of peripheral nerves (3). TRPV4-dependent Ca <sup>2+</sup> influx was also shown to mediate strain-induced and TGFβ1-induced epithelial-mesenchymal transition (EMT), suggesting a mechanistic role for TRPV4-mediated Ca <sup>2+</sup> transport in fibrosis and oncogenesis (4). Consistent with this, studies in capillary endothelial cells showed that mechanical strain-induced Ca <sup>2+</sup> influx through TRPV4 promote focal adhesion and stress fiber remodeling, mediated specifically through integrins, PI3K, and downstream kinases including Rho and ROCK (5).						
Background R	eferences	1. Everaerts, W. et al. (2010) <i>Prog Biophys Mol Biol</i> 103, 2-17. 2. Vriens, J. et al. (2004) <i>Proc Natl Acad Sci U S A</i> 101, 396-401. 3. Fecto, F. et al. (2011) <i>J Biol Chem</i> 286, 17281-91. 4. Sharma, S. et al. (2019) <i>J Cell Mol Med</i> 23, 761-74. 5. Thodeti, C.K. et al. (2009) <i>Circ Res</i> 104, 1123-30.						
Species Reacti	vity	Species reactivity is de	etermined by testin	g in at least one approve	ed application (e.g.,	western blot).		
Western Blot B	Western Blot Buffer IMPORTANT: For western blots, incubate membrane with diluted primary antibody in 5% w/v BS   TBS, 0.1% Tween® 20 at 4°C with gentle shaking, overnight.			n 5% w/v BSA, 1X				
Applications K	Dications Key W: Western Blotting IP: Immunoprecipitation							
Cross-Reactivi	ty Key	H: Human M: Mouse I	<b>Mk:</b> Monkey					
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