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Datasheet for 200-301-B59

TRPC6 Antibody

Overview

Description:	Anti-TRPC6 (MOUSE) Monoclonal Antibody - 200-301-B59
Item No.:	200-301-B59
Size:	100 µg
Applications:	ELISA, IHC, WB
Reactivity:	H. sapiens (Human), Mus musculus (Mouse)
Host Species:	Mouse

Product Details

Background:	TRPC6, also known as TRP6, short transient receptor potential channel 6 and transient receptor potential cation channel subfamily C member 6, is thought to form a receptor-activated non-selective calcium permeant cation channel. TRPC6 is probably operated by a phosphatidylinositol second messenger system activated by receptor tyrosine kinases or G-protein coupled receptors. It is activated by diacylglycerol (DAG) in a membrane-delimited fashion, independently of protein kinase C and may not to be activated by intracellular calcium store depletion. Defects in this gene are a cause of focal segmental glomerulosclerosis (FSGS). Expression of this protein has been reported in tissues such as placenta, lung, spleen, ovary, small intestine, and renal podocytes. Immunohistochemistry studies using polyclonal antibodies to this target have shown moderate to strong staining in cell types such as neurons, breast, respiratory, squamous and prostate epithelium, epidermis, placental trophoblasts, dendritic cells, and subsets of immune cells, and faint to moderate staining of adrenal, colon, ganglion cells, hepatocytes, heart, and testis.
Synonyms:	mouse anti-TRPC6 Antibody, TRPC 6, TRP6, short transient receptor potential channel 6 and transient receptor potential cation channel subfamily C member 6
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	3F2.H10.F2
Format:	IgG1

Target Details

Gene Name:	TRPC6
Reactivity:	H. sapiens (Human), Mus musculus (Mouse)
Immunogen Type:	Peptide
Immunogen:	This monoclonal antibody was produced by repeated immunizations with a synthetic peptide corresponding to a region near the carboxy terminus of human TRPC6 protein.
Purity/Specificity:	This product was purified from concentrated tissue culture supernate by Protein A chromatography. This antibody is specific for human TRPC6 protein. A BLAST analysis was used to suggest cross-reactivity with TRPC6 from chimpanzee based on 100% homology with the immunizing sequence. Cross-reactivity with TRPC6 from other sources has not been determined.
Relevant Links:	• UniProtKB - Q9Y210 • NCBI - 5730102 • GeneID - 7225

Application Details

Tested Applications:	ELISA, IHC, WB
Application Note:	Anti-TRPC6 monoclonal antibody has been tested by ELISA, immunohistochemistry and western blotting. Expect a band approximately 30 kDa in size corresponding to the cytoplasmic domain of TRPC6 protein by western blotting in the appropriate cell lysate or extract. Specific conditions for reactivity should be optimized by the end user. Use formalin-fixed paraffin-embedded sections for immunohistochemistry. No pre-treatment of sample is required. Strong staining was observed in adrenal, Purkinje neurons, cortical neurons, heart, ganglion cells, renal tubules, Sertoli cells, hepatocytes, skeletal muscle, exocrine pancreas, and germinal centers of lymphoid follicles. Moderate staining was observed in colon epithelium and plasma cells, B-lymphocytes, and parafollicular cells of the thyroid. Faint staining was seen in respiratory epithelium. Prostate and placenta were negative for staining. The antibody produced minimal to no background staining and appeared very specific at 2.5 µg/mL.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:10,000 - 1:50,000
IHC:	2.5 µg/mL
WB:	1:500- 1:2,000

Formulation

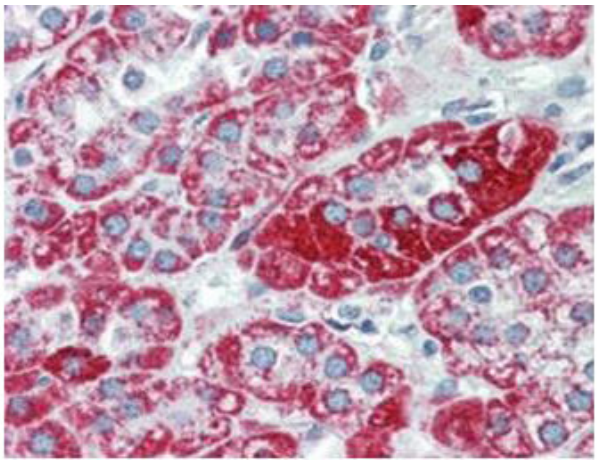
Physical State:	Liquid (sterile filtered)

Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

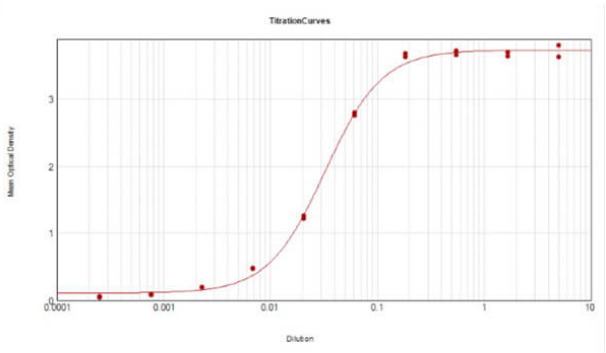
Shipping & Handling

Shipping Condition:	Dry Ice
Storage Condition:	Store vial at -20° C prior to opening. Aliquot contents and freeze at -20° C or below for extended storage. Avoid cycles of freezing and thawing. Centrifuge product if not completely clear after standing at room temperature. This product is stable for several weeks at 4° C as an undiluted liquid. Dilute only prior to immediate use.
Expiration:	Expiration date is one (1) year from date of receipt.

Images

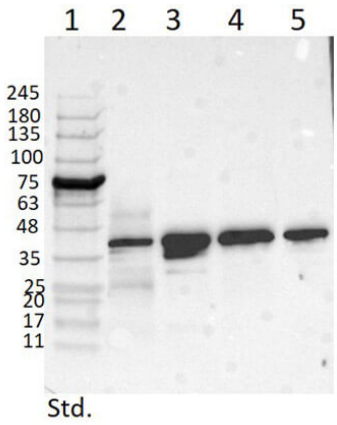


Immunohistochemistry
Immunohistochemistry using Rockland's anti-TRPC6 monoclonal antibody shows detection of TRPC6 in human adrenal (cortex) tissue (40X). The antibody was used a dilution to 2.5 µg/mL. The image shows strong staining with minimal background staining. Tissue was formalin fixed and paraffin embedded. No pre-treatment of sample was required. The image shows the localization of antibody as the precipitated red signal, with a hematoxylin purple nuclear counterstain. Personal communication, Andrew Elston, Lifespan Biosciences, Seattle, WA.



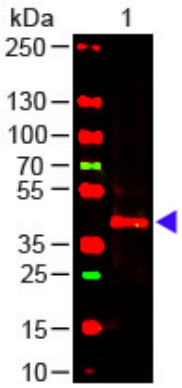
ELISA

ELISA Results of Mouse Anti-TRPC6 Antibody. Each well was coated in duplicate with 0.1µg of conjugate. The working dilution is 1:31,000. The starting dilution of antibody was 5µg/ml and the X-axis represents the Log10 of a 3-fold dilution. This titration is a 4-parameter curve fit where the IC50 is defined as the titer of the antibody. Assay performed using HRP conjugation Stabilizer (p/n MB-076), Rabbit Anti-Mouse IgG HRP conjugated (p/n 610-403-C46) and TMB substrate (p/n TMBE-1000).



Western Blot

Western Blot of Mouse Anti-TRPC6 Antibody. Lane 1: Opal Prestained Molecular Weight Marker (p/n MB-210-0500). Lane 2: Mouse Pancreas Tissue Lysate (p/n W10-000-T023) [10µg]. Lane 3: MCF-7 Whole Cell Lysate (p/n W09-000-360) [10µg]. Lane 4: A431 Whole Cell Lysate (p/n W09-000-361) [10µg]. Lane 5: Jurkat Whole Cell Lysate (p/n W09-001-370) [10µg]. Primary Antibody: Anti-TRPC6 at 1µg/mL overnight at 2-8°C. Secondary Antibody: Rabbit Anti-Mouse IgG Peroxidase (p/n 610-403-C46) 1:40000 for 30mins at RT. Blocking Buffer: BlockOut Buffer (p/n MB-073) for 30mins at RT. Predicted MW: ~30kDa. Observed MW: ~40kDa. Exposure: 5sec.



Western Blot

Western Blot of Mouse anti-TRPC6 Antibody. Lane 1: Mouse Kidney WCL (p/n W10-000-T017). Load: 10 µg per lane. Primary antibody: TRPC6 Antibody at 1:1000 for overnight at 4°C. Secondary antibody: donkey anti-mouse DyLight™ 649 (p/n 610-743-002) at 1:20,000 for 30 min at RT. Block: MB-070 for 30 min at RT.

References

- Alonso-González et al. Human Digital Meissner Corpuscles Display Immunoreactivity for the Multifunctional Ion Channels Trpc6 and Trpv4. *Anatomical record* (2017)

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