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Datasheet for 200-401-999

Selenophosphate Synthetase 2 Antibody

Overview

Description:	Anti-Selenophosphate Synthetase 2 (SPS2) (RABBIT) Antibody - 200-401-999
Item No.:	200-401-999
Size:	100 µg
Applications:	ELISA, WB, IHC, Multiplex
Reactivity:	Mouse
Host Species:	Rabbit

Product Details

Background:	This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI) and is suitable for Cancer, Immunology and Nuclear Signaling research. Selenophosphate synthetase (SelD) catalyzes the conversion of selenium to selenophosphate which is required by a number of bacterial, archaeal and eukaryotic organisms for synthesis of selenocysteine-tRNA, the precursor of selenocysteine in selenoenzymes. A second selenophosphate synthetase (SPS2) was identified in mammals. SPS2 is itself a selenoprotein in mammals.
Synonyms:	rabbit anti-Selenophosphate Synthetase 2 Antibody, rabbit anti-SPS 2 antibody, Selenide water dikinase 2 antibody, Selenium donor protein 2 antibody, SEPHS2 antibody
Host Species:	Rabbit
Clonality:	Polyclonal
Format:	IgG

Target Details

Gene Name:	Sephs2
Reactivity:	Mouse
Immunogen Type:	Recombinant Protein
Immunogen:	This Protein A purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a full-length recombinant protein corresponding to mouse SPS2.

Purity/Specificity:	This product was purified by Protein A chromatography from monospecific antiserum. This antibody reacts with mouse SPS2 and shows partial cross-reactivity with SPS1. A BLAST analysis was used to suggest cross-reactivity with SPS2 from human sources based on an 84% homology with the immunizing sequence. Cross-reactivity with SPS2 from other sources has not been determined.
Relevant Links:	• NCBI - 14717785 • UniProtKB - P97364 • GeneID - 20768

Application Details

Tested Applications:	ELISA, WB
Suggested Applications:	IHC, Multiplex (Based on references)
Application Note:	This Protein A purified antibody has been tested for use in ELISA and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 48 kDa in size corresponding to SPS2 by western blotting in the appropriate cell lysate or extract.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	1:5,000 - 1:20,000
IP:	1:100
WB:	1:500 - 1:2,000

Formulation

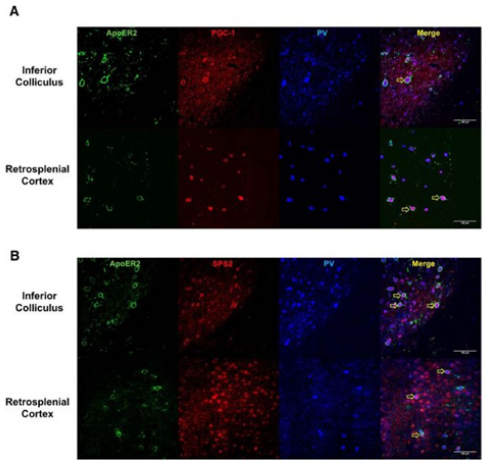
Physical State:	Liquid (sterile filtered)
Concentration:	2.3 mg/mL by UV absorbance at 280 nm
Buffer:	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Preservative:	0.01% (w/v) Sodium Azide
Stabilizer:	None

Shipping & Handling

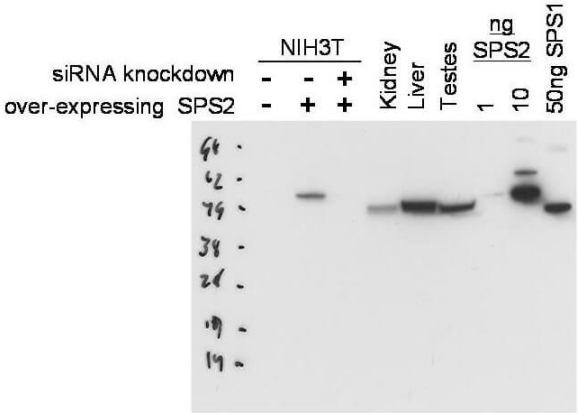
Shipping Condition:	Dry Ice

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



Immunofluorescence Microscopy
ApoER2 is preferentially expressed on metabolically active PV interneurons that comprise major sites of selenoprotein synthesis. A, Images of ApoER2 (green), PGC-1 (red), and PV (blue) in the IC and retrosplenial cortex. B, Images of ApoER2 (green), selenophosphate synthetase 2 (SPS2; red), and PV (blue) in the IC and retrosplenial cortex. Yellow arrows indicate triple-labeled neurons in merged images. Scale bar, 100 µm. Fig 2. PMID: 26586820



Western Blot
Western blot using Rockland's Protein A purified anti-SPS2 antibody shows detection of SPS2 in NIH3T3 cells over-expressing this protein. No signal is seen in control lysates or in lysates from cells over-expressing the protein after pre-treatment with SPS2 siRNA. Endogenous SPS2 can be detected in mouse kidney, liver and testes tissue lysates. Partial cross-reactivity is seen against recombinant SPS1. The primary antibody was used at a 1:1000 dilution. Personal Communication, D. Hatfield, NCI, Bethesda, MD.

References

- Pitts et al. Competition between the Brain and Testes under Selenium-Compromised Conditions: Insight into Sex Differences in Selenium Metabolism and Risk of Neurodevelopmental Disease. *The Journal of Neuroscience* (2015)

Disclaimer

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