



## Anti-Selenophosphate Synthetase 1 (SPS1) (RABBIT) Antibody - 100-401-A22

**Code:** 100-401-A22

**Size:** 100 µL

**Product Description:** Anti-Selenophosphate Synthetase 1 (SPS1) (RABBIT) Antibody - 100-401-A22

**Concentration:** 85 mg/mL by Refractometry

**PhysicalState:** Lyophilized

|                               |  |
|-------------------------------|--|
| <b>Label</b>                  | Unconjugated   |
| <b>Host</b>                   | Rabbit   |
| <b>Gene Name</b>              | SEPHS1, Sps1   |
| <b>Species Reactivity</b>     | mouse, human, rat  |
| <b>Buffer</b>                 | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2   |
| <b>Reconstitution Volume</b>  | 100 µL   |
| <b>Reconstitution Buffer</b>  | Restore with deionized water (or equivalent)   |
| <b>Stabilizer</b>             | None   |
| <b>Preservative</b>           | 0.01% (w/v) Sodium Azide   |
| <b>Storage Condition</b>      | Store vial at 4° C prior to restoration. For extended storage aliquot contents and freeze at -20° C or below. 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.  |
| <b>Synonyms</b>               | rabbit anti-Selenophosphate Synthetase 1 Antibody, rabbit anti-SPS1 antibody, Selenide water dikinase 1, Selenophosphate synthetase 1, Selenium donor protein 1  |
| <b>Application Note</b>       | This 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 43 kDa in size corresponding to SPS1 by western blotting in the appropriate cell lysate or extract.   |
| <b>Background</b>             | 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 1 (SPS1) (also known as selenide water dikinase or selenium donor protein 1) is the homolog of the SelD gene product in <i>E. coli</i> . In <i>E. coli</i> , SelD generates the selenium donor for selenocysteine tRNA biosynthesis. The function of SPS1 in mammals is still unknown but appears to differ from that of <i>E. coli</i> SelD.   |
| <b>Purity And Specificity</b> | This antibody is directed against mouse SPS1. The product is delipidated and defibrinated antiserum. A BLAST analysis was used to suggest cross-reactivity with SPS1 from mouse, human and rat based on a 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known.   |
| <b>Assay Dilutions</b>        | User Optimized   |
| <b>ELISA</b>                  | 1:5,000 - 1:20,000   |
| <b>Western Blot</b>           | 1:500 - 1:2,000  |
| <b>Other Assays</b>           | User Optimized   |
| <b>Expiration</b>             | Expiration date is one (1) year from date of opening.  |
| <b>Immunogen</b>              | This antibody was prepared from whole rabbit serum produced by repeated immunizations with a full-length recombinant protein corresponding to mouse SPS1.  |
| <b>General Reference</b>      | Small-Howard A, Morozova N, Stoytcheva Z, Forry EP, Mansell JB, Harney JW, Carlson BA, Xu XM, Hatfield DL, Berry MJ (2006) Supramolecular complexes mediate selenocysteine incorporation in vivo. <i>Mol. Cell Biol.</i> 6:2337-46. Ogasawara Y, Lacourciere GM, Ishii K, Stadtman TC (2005) Characterization of potential selenium-binding proteins in the selenophosphate synthetase system. <i>Proc. Natl Acad. Sci. USA</i> 102(4):1012-6. Stadtman T (2004) Methanococcus vannielii selenium metabolism: purification and N-terminal amino acid sequences of a novel selenium-binding protein and selenocysteine lyase. <i>IUBMB Life</i> 56(7):427-31. Tamura T, Yamamoto S, Takahata M, Sakaguchi H, Tanaka H, Stadtman TC, Inagaki K (2004) Selenophosphate synthetase genes from lung adenocarcinoma cells: Sps1 for recycling L-selenocysteine and Sps2 for selenite assimilation. <i>Proc. Natl Acad. Sci. USA</i> 101(46):16162-7. |

### Related Products

|           |   |
|-----------|---|
| 610-4302  | Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302 |
| 611-1302  | Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302  |
| B304      | NORMAL GOAT SERUM (NGS) - B304  |
| B501-0500 | BLOTTO Immunoanalytical Grade (Non-Fat Dry Milk) - B501-0500            |

### Related Links

NCBI

<http://www.ncbi.nlm.nih.gov/protein/26336959?report=genpept>

UniProtKB - <http://www.uniprot.org/uniprot/Q8BH69>

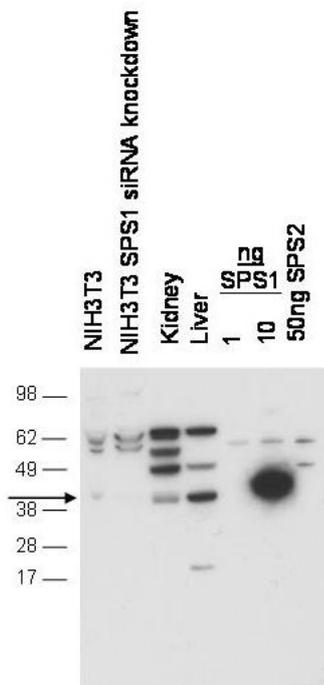
NCBI - AAH66037.1

<http://www.ncbi.nlm.nih.gov/protein/AAH66037.1>

GeneID - 109079 <http://www.ncbi.nlm.nih.gov/gene/109079>

### Images

- Western blot using Rockland's anti-SPS1 antibody shows detection of endogenous SPS1 in NIH3T3 cell. No signal is seen in lysates from cells after pre-treatment with SPS1 siRNA. Endogenous SPS1 can be detected in mouse kidney and liver tissue lysates. Negligible cross-reactivity is seen against recombinant SPS2. The primary antibody was used at a 1:1000 dilution. Personal Communication, D. Hatfield, NCI, Bethesda, MD.



### Disclaimer

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