



## Anti-PBK1 (RABBIT) Antibody - 600-401-A24

**Code:** 600-401-A24

**Size:** 100 µg

**Product Description:** Anti-PBK1 (RABBIT) Antibody - 600-401-A24

**Concentration:** 1.1 mg/mL by UV absorbance at 280 nm

**PhysicalState:** Liquid (sterile filtered)

|                               |  |
|-------------------------------|--|
| <b>Label</b>                  | Unconjugated   |
| <b>Host</b>                   | Rabbit   |
| <b>Gene Name</b>              | RSL1D1   |
| <b>Species Reactivity</b>     | human  |
| <b>Buffer</b>                 | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2   |
| <b>Stabilizer</b>             | None   |
| <b>Preservative</b>           | 0.01% (w/v) Sodium Azide   |
| <b>Storage Condition</b>      | 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.  |
| <b>Synonyms</b>               | rabbit anti-PBK1 antibody, PBK-1, PBK 1, CATX-11, CATX11 antibody, RSL1D1, Cellular senescence inhibited gene protein antibody, CSIG antibody, L12 antibody, Ribosomal L1 domain containing protein 1 antibody   |
| <b>Application Note</b>       | This affinity purified antibody has been tested for use in ELISA, immunoprecipitation, immunofluorescence microscopy and western blotting. Specific conditions for reactivity should be optimized by the end user. Expect a band approximately 55 kDa in size corresponding to PBK1 by western blotting in the appropriate cell lysate or extract. This antibody is capable of detecting both over-expressed and endogenous PBK1. For immunofluorescence microscopy, fix cells with methanol.  |
| <b>Background</b>             | This antibody is designed, produced, and validated as part of a collaboration between Rockland and the National Cancer Institute (NCI). PBK1 protein (also known as Ribosomal L1 domain-containing protein 1, cellular senescence-inhibited gene protein, and CATX-11) was isolated from highly invasive first trimester trophoblast cells and has been proposed to regulate their naturally occurring invasive behavior (Huch et al., 1998). PBK1 was also found to be over-expressed in non-small-cell lung cancer (NSCLC) cells (Petroziello et al., 2004). A recent study suggests that PBK1 may up-regulate the urokinase-type plasminogen activator (uPA) gene, which plays an important role in cellular matrix degradation and activation of other protease systems involved in cell invasion (Tong et al., 2005). The cellular localization dynamics of PBK1, as well as the data from its yeast homologue (Cic1p/Nsa3p) suggest that PBK1 is essential for ribosome biogenesis (Fatica et al., 2003). Thus, PBK1 could be controlling cell proliferation by regulating the level of ribosome production. It is hypothesized that PBK1 is involved in regulating both, cell proliferation and invasiveness, therefore playing a dual function in cancer cells transformation. |
| <b>Purity And Specificity</b> | This product was affinity purified from monospecific antiserum by immunoaffinity chromatography. This antibody is specific for human PBK1 protein. A BLAST analysis was used to suggest limited cross-reactivity with PBK1 from mouse based on a 75% homology with the immunizing sequence. Cross-reactivity with PBK1 from other sources has not been determined.   |
| <b>Assay Dilutions</b>        | User Optimized   |
| <b>ELISA</b>                  | 1:2,500 - 1:10,000   |
| <b>Western Blot</b>           | 1:500 - 1:2,000  |
| <b>IF Microscopy</b>          | 1:100  |
| <b>Other Assays</b>           | User Optimized   |
| <b>Expiration</b>             | Expiration date is one (1) year from date of opening.  |
| <b>Immunogen</b>              | This affinity purified antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to an internal sequence of human PBK1.  |

## General Reference

Huch, G., Hohn, H.P. and Denker, H.W. (1998) Identification of differentially expressed genes in human trophoblast cells by differential-display RT-PCR. *Placenta* 19 (8), 557-567. Petroziello, J., Yamane, A., Westendorf, L., Thompson, M., McDonagh, C., Cerveny, C., Law, C.L., Wahl, A. and Carter, P. (2004) Suppression subtractive hybridization and expression profiling identifies a unique set of genes overexpressed in non-small-cell lung cancer. *Oncogene* 23 (46), 7734-7745. Tong, C., Tan, L., Li, P. and Zhu, Y.S. (2005) Identification of a novel nucleus protein involved in the regulation of urokinase in 95D cells. *Acta Biochim. Biophys. Sin (Shanghai)* 37 (5), 303-309.

## Related Products

|             |   |
|-------------|---|
| 200-301-268 | Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268                |
| 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  |

## Related Links

UniProtKB - O76021

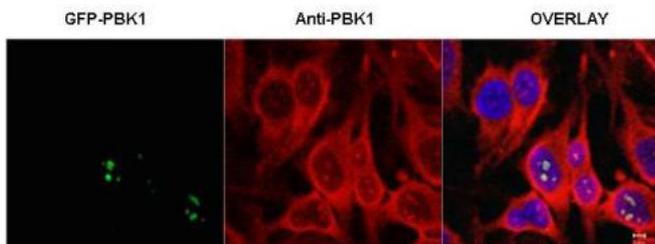
<http://www.uniprot.org/uniprot/O76021>

NCBI - 62901068 <http://www.ncbi.nlm.nih.gov/protein/62901068>

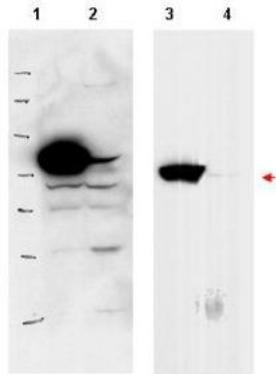
GeneID - 26156

## Images

- 1 Immunofluorescence microscopy of HeLa cells transfected with GFP-PBK1. In the overlay, specific antibody staining is shown to co-localize with recombinant protein. Cells were fixed with methanol prior to staining. Personal communication, J. McNally and D. Stavreva, NCI, Bethesda, MD.



- 2 Western blot using Rockland's affinity purified anti-PBK1 antibody shows detection of over-expressed PBK1 in lysates from HeLa cells transfected with Flag-PBK1. Lanes 1 and 3 contain lysate from Flag-PBK1 transfected HeLa cells. Lanes 2 and 4 contain lysate from cells transfected with null vector. Lanes 1 and 2 were blotted with anti-Flag antibody. Lanes 3 and 4 were probed with a 1:500 dilution of anti-PBK1. The band at 75 kDa, indicated by the arrowhead, corresponds to PBK1. Personal communication, J. McNally and D. Stavreva, NCI, Bethesda, MD.



### Disclaimer

This product is for research use only and is not intended for therapeutic or diagnostic applications. Please contact a technical service representative for more information. All products of animal origin manufactured by Rockland Immunochemicals are derived from starting materials of North American origin. Collection was performed in United States Department of Agriculture (USDA) inspected facilities and all materials have been inspected and certified to be free of disease and suitable for exportation. All properties listed are typical characteristics and are not specifications. All suggestions and data are offered in good faith but without guarantee as conditions and methods of use of our products are beyond our control. All claims must be made within 30 days following the date of delivery. The prospective user must determine the suitability of our materials before adopting them on a commercial scale. Suggested uses of our products are not recommendations to use our products in violation of any patent or as a license under any patent of Rockland Immunochemicals, Inc. If you require a commercial license to use this material and do not have one, then return this material, unopened to: Rockland Inc., P.O. BOX 5199, Limerick, Pennsylvania, USA.