

**Datasheet for 100-401-A25****HIF-1-alpha hydroxy P564 Antibody****Overview**

|                      |                                                              |
|----------------------|--------------------------------------------------------------|
| <b>Description:</b>  | Anti-HIF1 alpha hydroxy P564 (RABBIT) Antibody - 100-401-A25 |
| <b>Item No.:</b>     | 100-401-A25                                                  |
| <b>Size:</b>         | 100 µL                                                       |
| <b>Applications:</b> | ELISA, WB                                                    |
| <b>Reactivity:</b>   | Human                                                        |
| <b>Host Species:</b> | Rabbit                                                       |

**Product Details**

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
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| <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. Tumor hypoxia often directly correlates with aggressive phenotype, metastasis progression and resistance to chemotherapy. HIF-1 transcription factors are dramatically induced in hypoxic areas and regulate the expression of genes necessary for tumor adaptation to conditions of low oxygen. The stabilization of HIF-1α by hypoxia is critically dependent upon the hydroxylation of certain Proline residues that exist in the oxygen-dependent degradation domain of HIF-1α. HIF factors are now considered an important therapeutic target for cancer intervention. HIF-1α is useful to researchers interested in cell metabolism, cell survival, and angiogenesis. |
| <b>Synonyms:</b>     | rabbit anti-Hif-1 alpha hydroxy P564 Antibody, Hypoxia-inducible factor 1-alpha antibody, ARNT-interacting protein antibody, Member of PAS protein 1 antibody, Basic-helix-loop-helix-PAS protein MOP1 antibody, PAS domain-containing protein 8 antibody, Class E basic helix-loop-helix protein 78 antibody                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Host Species:</b> | Rabbit                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Clonality:</b>    | Polyclonal                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>Format:</b>       | Antiserum                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |

**Target Details**

|                    |       |
|--------------------|-------|
| <b>Gene Name:</b>  | HIF1A |
| <b>Reactivity:</b> | Human |

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| <b>PTM Specificity:</b>    | Hydroxylation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| <b>Immunogen Type:</b>     | Conjugated Peptide                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| <b>Immunogen:</b>          | This antibody was prepared from whole rabbit serum produced by repeated immunizations with a synthetic peptide corresponding to a region surrounding the P564 of human HIF-1a.                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Purity/Specificity:</b> | This antibody is directed against human HIF-1a hydroxyP564 and is specific for the hydroxylated form of the protein. Minimal reactivity occurs with the non-hydroxylated form of the protein. This antibody is specific for HIF-1a hydroxylated at P564. Minimal cross-reactivity occurs with non-hydroxylated HIF-1a. A BLAST analysis was used to suggest cross-reactivity with HIF-1a from human, monkey, mouse, rat, dog, bovine and Xenopus sources based on a 100% homology with the immunizing sequence. Reactivity against homologues from other sources is not known. |
| <b>Relevant Links:</b>     | <ul style="list-style-type: none"><li>• <a href="#">NCBI - 4504385</a></li><li>• <a href="#">UniProtKB - Q16665</a></li><li>• <a href="#">GeneID - 3091</a></li></ul>                                                                                                                                                                                                                                                                                                                                                                                                          |

## Application Details

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| <b>Tested Applications:</b> | ELISA, WB                                                                                                                                                                                                                                                                                     |
| <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 110 kDa in size corresponding to HIF-1a hydroxyl P564 by western blotting in the appropriate cell lysate or extract. |
| <b>Assay Dilutions:</b>     | All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.                                                                                                                                                                                               |
| <b>ELISA:</b>               | 1:5,000 - 1:20,000                                                                                                                                                                                                                                                                            |
| <b>IHC:</b>                 | User Optimized                                                                                                                                                                                                                                                                                |
| <b>WB:</b>                  | 1:500 - 1:2,000                                                                                                                                                                                                                                                                               |

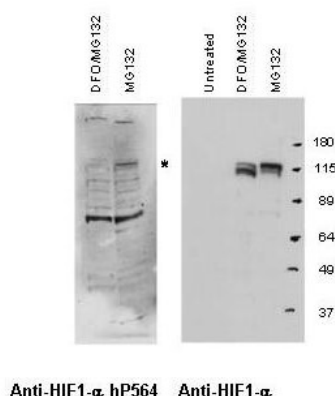
## Formulation

|                        |                                                            |
|------------------------|------------------------------------------------------------|
| <b>Physical State:</b> | Liquid (sterile filtered)                                  |
| <b>Concentration:</b>  | 65 mg/mL by Refractometry                                  |
| <b>Buffer:</b>         | 0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2 |
| <b>Preservative:</b>   | 0.01% (w/v) Sodium Azide                                   |
| <b>Stabilizer:</b>     | 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



### Western Blot

Western blot using Rockland's anti-HIF-1α HYDROXY P564 antibody shows detection (left panel) of hydroxylated HIF-1 α in nuclear extracts of A549 cells treated with MG132 (a proteasome inhibitor). Hydroxyproline is not recognized on HIF-1α when cells are first treated with DFO, a propyl hydroxylase inhibitor that prevents HIF hydroxylation. Control staining is shown (right panel) using conventional anti-HIF-1α. The asterisk marks a band approximately 110 kDa in size corresponding to HIF1-α. The primary antibody was used at a 1:1,000 dilution in 2% BLOTTO. Personal Communication, L. Neckers and O. Aprelikova, NCI, Bethesda, MD.

## References

- Moorthy BT et al. The evolutionarily conserved arginyltransferase 1 mediates a pVHL-independent oxygen-sensing pathway in mammalian cells. *Dev Cell*. (2022)

## 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.