Anti-Hif-1 hydroxyP564 (RABBIT) Antibody - 100-401-A25

Code: 100-401-A25 **Size:** 100 µL

Product Description: Anti-Hif-1 hydroxyP564 (RABBIT) Antibody - 100-401-A25

Concentration: 65 mg/mL by Refractometry

PhysicalState: Liquid (sterile filtered)

Label	Unconjugated
Host	Rabbit
Gene Name	HIF1A
Species Reactivity	human, monkey, mouse, rat, dog, bovine, Xenopus
Buffer	0.02 M Potassium Phosphate, 0.15 M Sodium Chloride, pH 7.2
Stabilizer	None
Preservative	0.01% (w/v) Sodium Azide
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.
Synonyms	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
Application Note	This antibody has been tested for use in ELISA and western blotting. This antibody is specific for HIF-1a hydroxylated at P564. Minimal cross-reactivity occurs with non-hydroxylated HIF-1a. 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.
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. 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-1a by hypoxia is critically dependent upon the hydroxylation of certain Proline residues that exist in the oxygen-dependent degradation domain of HIF-1a. HIF factors are now considered an important therapeutic target for cancer intervention. HIF-1a is useful to researchers interested in cell metabolism, cell survival, and angiogenesis.
Purity And Specificity	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. 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.
Assay Dilutions	User Optimized
ELISA	1:5,000 - 1:20,000
Western Blot	1:500 - 1:2,000
Immunohistochemistry	User Optimized
Other Assays	User Optimized
Expiration	Expiration date is one (1) year from date of opening.
Immunogen	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.
General Reference	Kageyama, Y. and Koshiji, M. (2004) Leu-574 of human HIF-1alpha is a molecular determinant of prolyl hydroxylation. FASEB J. 18(9):1028-1030. Griffiths, E.A., Pritchard, S.A., Valentine, H.R., Whitchelo, N., Bishop, P.W., Ebert, M.P., Price, P.M., Welch, I.M. and West, C.M. (2007) Hypoxia-inducible factor-1alpha expression in the gastric carcinogenesis sequence and its prognostic role in gastric and gastro-oesophageal adenocarcinomas. Br. J. Cancer 96(1):95-103. Yin, L., Kharbanda, S. and Kufe, D. (2007) Mucin 1 oncoprotein blocks hypoxia-inducible factor 1alpha activation in a survival response to hypoxia. J. Biol. Chem. 282(1):257-266.

Related Products

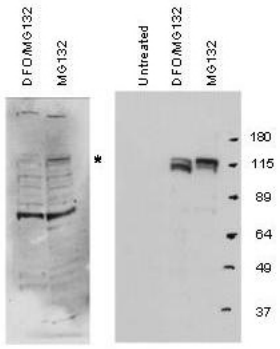
200-301-268	Anti-AKT pS473 (MOUSE) Monoclonal Antibody - 200-301-268
610-4302	Anti-MOUSE IgG (H&L) (RABBIT) Antibody Peroxidase Conjugated - 610-4302
611-1302	Anti-RABBIT IgG (H&L) (GOAT) Antibody Peroxidase Conjugated - 611-1302
B304	NORMAL GOAT SERUM (NGS) - B304

Related Links

	NCBI - 4504385
http://www.ncbi.nlm.nih.gov/protein/4504385	
UniProtKB - Q16665	http://www.uniprot.org/uniprot/Q16665
	GeneID - 3091

Images

1	Western blot using Rockland's anti-HIF-1alpha HYDROXY P564 antibody shows detection (left panel) of hydroxylated HIF-1 alpha in nuclear extracts of A549 cells treated with MG132 (a proteosome inhibitor). Hydroxyproline is not recognized on HIF-1alpha 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-1alpha. The asterisk marks a band approximately 110 kDa in size corresponding to HIF1-alpha. The primary antibody was used at a 1:1,000 dilution in 2% BLOTTO. Personal Communication, L. Neckers and O. Aprelikova, NCI, Bethesda, MD.



Anti-HIF1-α hP564 Anti-HIF1-α

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