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Datasheet for 200-301-F45

HIF-1-alpha Antibody

Overview

Description:	Anti-HIF1 alpha (MOUSE) Monoclonal Antibody - 200-301-F45
Item No.:	200-301-F45
Size:	100 µg
Applications:	ELISA, IF, IHC, WB
Reactivity:	Human, Mouse, Rat, Bovine
Host Species:	Mouse

Product Details

Background:	Hypoxia-inducible factor 1 (HIF1) is a heterodimeric transcription factor that plays a critical role in the cellular response of hypoxia. The HIF1 complex consists of two subunits, HIF1-Alpha and HIF1-Beta, which are basic helix-loop-helix proteins of the PAS family. HIF1 regulates the transcription of a broad range of genes that facilitate responses to the hypoxic environment, including genes regulating angiogenesis, erythropoiesis, cell cycle, metabolism and apoptosis. The widely expressed HIF-1α is typically degraded rapidly in normoxic cells by the ubiquitin/proteasomal pathway. Under normoxic conditions, HIF-1α is proline hydroxylated leading to a conformational change that promotes binding to the von Hippel Lindau protein (VLH) E3 ligase complex; ubiquitination and proteasomal degradation follows. Both hypoxic conditions and chemical hydroxylase inhibitors (such as desferrioxamine and cobalt) inhibit HIF-1α degradation and lead to its stabilization. In addition, HIF-1α can be induced in an oxygen-independent manner by various cytokines through the PI3K-AKT-mTOR pathway.
Synonyms:	ARNT interacting protein, HIF1A, Hypoxia inducible factor 1 alpha, MOP1, PASD8,
Host Species:	Mouse
Clonality:	Monoclonal
Clone ID:	ESEE122
Format:	IgG1

Target Details

Gene Name:	HIF1A

Reactivity:	Human, Mouse, Rat, Bovine
Immunogen Type:	Recombinant Protein
Immunogen:	HIF1 alpha Antibody was produced in mice by repeated immunizations raised against a recombinant fragment corresponding to an internal region of HIF1 alpha.
Purity/Specificity:	Anti-HIF1α Antibody was purified by Protein G chromatography. A BLAST analysis was used to suggest cross-reactivity with HIF1α from human, mouse, rat, and cow based on 100% homology with the immunizing sequence. Cross-reactivity with HIF1α from other sources has not been determined. Oxidative Stress/Cell Signaling research.
Relevant Links:	• NCBI - 4504385 • GeneID - 3091 • UniProtKB - Q16665

Application Details

Tested Applications:	ELISA, IF, IHC, WB
Application Note:	Anti-HIF1α Antibody has been tested in WB, IHC-P, IF microscopy, and ELISA. Specific conditions for reactivity should be optimized by the end user.
Assay Dilutions:	All assays should be optimized by the user. Recommended dilutions (if any) may be listed below.
ELISA:	User Optimized
IF:	8-21ug/mL
IHC:	1:1000-1:8000
WB:	User Optimized

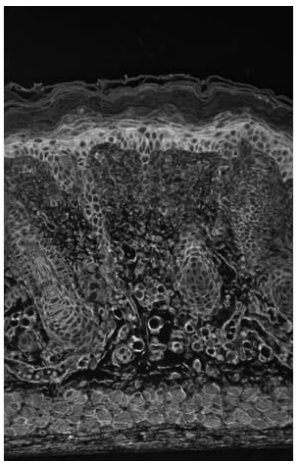
Formulation

Physical State:	Liquid (sterile filtered)
Concentration:	1.0 mg/mL by UV absorbance at 280 nm
Buffer:	1X PBS, pH 7.4
Preservative:	0.09% (w/v) Sodium Azide
Stabilizer:	50% (v/v) Glycerol

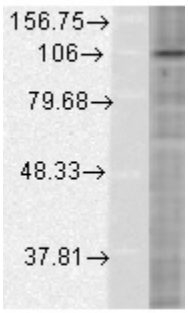
Shipping & Handling

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



Immunohistochemistry
Immunohistochemistry of mouse anti-HIF1 alpha antibody. Tissue: mouse backskin sections. Primary Antibody: HIF1 alpha antibody at 1ug/ml for 1h at RT. Secondary antibody: Peroxidase mouse secondary at 1:10,000 for 45 min at RT. Localization: Nuclear and cytoplasmic.



Western Blot
Western Blot of mouse anti-HIF1 alpha antibody. Lane 1: HeLa cell lysates. Lane 2: none. Load: 35 µg per lane. Primary antibody: HIF1 alpha antibody at 1:500 for overnight at 4°C. Secondary antibody: IRDye800™ mouse secondary antibody at 1:10,000 for 45 min at RT. Block: 5% BLOTTO overnight at 4°C. Predicted/Observed size: 93.5 kDa, ~106 kDa for HIF1α. Other band(s): none.

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.