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HIF3 alpha Rabbit pAb

Catalog # AP96544

Product Information

Application	WB, E
Primary Accession	Q9Y2N7
Other Accession	Q9Y2N7
Reactivity	Human
Host	Rabbit
Clonality	Polyclonal
Calculated MW	72433
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from human HIF3 alpha
Epitope Specificity	511-610/669
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 1 basic helix-loop-helix (bHLH) domain.Contains 2 PAS (PER-ARNT-SIM) domains.
SUBUNIT	Heterodimerizes with ARNT. Interacts via the oxygen-dependent degradation domain (ODD) with the beta domain of VHL.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Hypoxia-inducible factor (HIF) is one of the most important factors in the cellular response to hypoxia, transcriptionally activating genes encoding proteins that mediate adaptive responses to reduced oxygen availability. HIF is a heterodimer consisting of one of three subunits, HIF1 alpha, HIF2 alpha, or HIF3 alpha. HIF target genes play critical roles in metabolism, angiogenesis, cell proliferation and cell survival. HIF3 alpha protein is one of several alpha/beta-subunit heterodimeric transcription factors that regulate many adaptive responses to low oxygen tension (hypoxia). The alpha 3 subunit lacks the transactivation domain found in factors containing either the alpha 1 or alpha 2 subunits. HIF3 alpha may be a marker for tumor growth and angiogenesis.

Additional Information

Gene ID	64344
Other Names	HIF-3A; HIF3-alpha-1; IPAS; MOP7; PASD7; bHLHe17; HIF3A_HUMAN; HIF3A; HIF-3-alpha; HIF3-alpha; Basic-helix-loop-helix-PAS protein MOP7; Class E basic helix-loop-helix protein 17 (bHLHe17); Inhibitory PAS domain protein (IPAS); Member of PAS protein 7; PAS domain-containing protein 7; hypoxia inducible factor 3 subunit alpha
Dilution	WB=1:500-2000,ELISA=1:5000-10000

Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	HIF3A (HGNC:15825)
Synonyms	BHLHE17, MOP7, PASD7
Function	Acts as a transcriptional regulator in adaptive response to low oxygen tension. Acts as a regulator of hypoxia-inducible gene expression (PubMed:11573933, PubMed:16126907, PubMed:19694616, PubMed:20416395, PubMed:21069422). Functions as an inhibitor of angiogenesis in hypoxic cells of the cornea. Plays a role in the development of the cardiorespiratory system. May also be involved in apoptosis (By similarity).
Cellular Location	Nucleus. Cytoplasm Nucleus speckle {ECO:0000250|UniProtKB:Q0VBL6}. Mitochondrion {ECO:0000250|UniProtKB:Q0VBL6}. Note=In the nuclei of all periportal and perivenous hepatocytes. In the distal perivenous zone, detected in the cytoplasm of the hepatocytes. Shuttles between the nucleus and the cytoplasm in a CRM1-dependent manner. Colocalizes with BAD in the cytoplasm. Colocalizes with EPAS1 and HIF1A in the nucleus and speckles (By similarity). Localized in the cytoplasm and nuclei under normoxia, but increased in the nucleus under hypoxic conditions (PubMed:19694616). Colocalized with HIF1A in kidney tumors (PubMed:19694616). {ECO:0000250|UniProtKB:Q0VBL6, ECO:0000250|UniProtKB:Q9JHS2, ECO:0000269|PubMed:19694616}
Tissue Location	Expressed in vascular cells (at protein level) (PubMed:21069422). Expressed in kidney (PubMed:11573933, PubMed:19694616). Expressed in lung epithelial cells (PubMed:16775626) Expressed in endothelial cells (venous and arterial cells from umbilical cord and aortic endothelial cells) and in vascular smooth muscle cells (aorta) (PubMed:21069422). Strongly expressed in the heart, placenta, and skeletal muscle, whereas a weak expression profile was found in the lung, liver, and kidney (PubMed:12538644). Expressed weakly in cell renal cell carcinoma (CC-RCC) compared to normal renal cells (PubMed:16126907). Expression is down-regulated in numerous kidney tumor cells compared to non tumor kidney tissues (PubMed:16126907). Isoform 2 is expressed in heart, placenta, lung, liver, skeletal muscle and pancreas and in numerous cancer cell lines (PubMed:20416395). Isoform 3 and isoform 4 are weakly expressed in heart, placenta, lung, liver, skeletal muscle and pancreas (PubMed:20416395). Isoform 4 is expressed in fetal tissues, such as heart, brain, thymus, lung, liver, skeletal kidney and spleen (PubMed:20416395). Isoform 3 is weakly expressed in fetal tissues, such as liver and kidney (PubMed:20416395).

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