

Anti-HIF-2-Alpha Antibody

Catalog # ABO10584

Product Information

Application	WB
Primary Accession	Q9JHS1
Host	Rabbit
Reactivity	Human, Mouse, Rat
Clonality	Polyclonal
Format	Lyophilized
Description	Rabbit IgG polyclonal antibody for Endothelial PAS domain-containing protein 1(EPAS1) detection. Tested with WB in Human;Mouse;Rat.
Reconstitution	Add 0.2ml of distilled water will yield a concentration of 500ug/ml.

Additional Information

Gene ID	29452
Other Names	Endothelial PAS domain-containing protein 1, EPAS-1, Hypoxia-inducible factor 2-alpha, HIF-2-alpha, HIF2-alpha, Epas1, Hif2a
Calculated MW	96718
Application Details	Western blot, 0.1-0.5 µg/ml, Human, Mouse, Rat
Subcellular Localization	Nucleus . Nucleus speckle . Colocalizes with HIF3A in the nucleus and speckles. .
Source	Eukaryota
Protein Name	Endothelial PAS domain-containing protein 1(EPAS-1)
Contents	Each vial contains 5mg BSA, 0.9mg NaCl, 0.2mg Na2HPO4, 0.05mg Thimerosal, 0.05mg NaN3.
Immunogen	A synthetic peptide corresponding to a sequence in the middle region of human HIF-2-alpha(282-301aa, HALDSENMTKSHQNLCTKGQ), identical to the related mouse and rat sequence.
Purification	Immunogen affinity purified.
Cross Reactivity	No cross reactivity with other proteins
Storage	At -20° C for one year. After r° Constitution, at 4° C for one month. It° Can also be aliquotted and stored frozen at -20° C for a longer time.Avoid repeated freezing and thawing.

Protein Information

Name Epas1

Synonyms Hif2a

Function Transcription factor involved in the induction of oxygen regulated genes. Heterodimerizes with ARNT; heterodimer binds to core DNA sequence 5'-TACGTG-3' within the hypoxia response element (HRE) of target gene promoters (By similarity). Regulates the vascular endothelial growth factor (VEGF) expression and seems to be implicated in the development of blood vessels and the tubular system of lung. May also play a role in the formation of the endothelium that gives rise to the blood brain barrier. Potent activator of the Tie-2 tyrosine kinase expression. Activation requires recruitment of transcriptional coactivators such as CREBBP and probably EP300. Interaction with redox regulatory protein APEX seems to activate CTAD (By similarity).

Cellular Location Nucleus {ECO:0000250|UniProtKB:P97481, ECO:0000255|PROSITE-ProRule:PRU00981}. Nucleus speckle {ECO:0000250|UniProtKB:P97481}. Note=Colocalizes with HIF3A in the nucleus and speckles. {ECO:0000250|UniProtKB:P97481}

Background

HIF-2 alpha is also designated EPAS1 whose gene is mapped to 2p21-p16. The predicted mouse protein is 88% identical to human EPAS1. The human EPAS1 gene contains 15 exons and spans at least 120 kb. The positions of the introns within the genomic region encoding the N-terminal bHLH-PAS domains of EPAS1 and AHR are similar, suggesting that the 5-prime ends of the 2 genes may have arisen from a gene duplication event¹. Moreover, the predicted protein shares 48% sequence identity with HIF1-alpha, a bHLH-PAS transcription factor that induces EPO gene expression in cultured cells in response to hypoxia. Like HIF1A, EPAS1 binds to and activates transcription from the HIF1A response element derived from the 3-prime flanking region of the EPO gene. EPAS1 is predominantly expressed in highly vascularized tissues of adult humans and in endothelial cells of the mouse adult and embryo. Furthermore, EPAS1 may represent an important regulator of vascularization, perhaps involving the regulation of endothelial cell gene expression in response to hypoxia². HIF2A is expressed at relatively higher levels in villus sections of placenta and in lung samples compared with other tissues examined³. In addition, The variation in EPAS1 influences the relative contribution of aerobic and anaerobic metabolism and hence the maximum sustainable metabolic power for a given event duration⁴.

Images

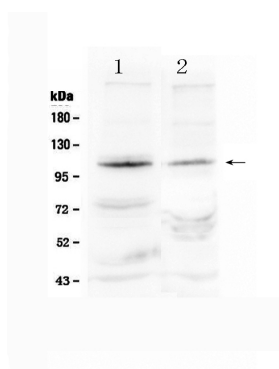


Figure 1. Western blot analysis of HIF2A using anti- HIF2A antibody (ABO10584). Electrophoresis was performed on a 5-20% SDS-PAGE gel at 70V (Stacking gel) / 90V (Resolving gel) for 2-3 hours. The sample well of each lane was loaded with 50ug of sample under reducing conditions. Lane 1: rat thymus tissue lysates, Lane 2: rat testis tissue lysates, After Electrophoresis, proteins were transferred to a Nitrocellulose membrane at 150mA for 50-90 minutes. Blocked the membrane with 5% Non-fat Milk/ TBS for 1.5 hour at RT. The membrane was incubated with rabbit anti- HIF2A antigen affinity purified polyclonal antibody (Catalog # ABO10584) at 0.5 µg/mL

overnight at 4 °C, then washed with TBS-0.1%Tween 3 times with 5 minutes each and probed with a goat anti-rabbit IgG-HRP secondary antibody at a dilution of 1:10000 for 1.5 hour at RT. The signal is developed using an Enhanced Chemiluminescent detection (ECL) kit with Tanon 5200 system. A specific band was detected for HIF2A at approximately 110-120KD. The expected band size for HIF2A is at 96KD.

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.