



## Product Information Sheet

### **Polyclonal Anti-HIF-2 $\alpha$ (Magnetic Bead Conjugate)**

**Catalogue No.** PA1129-M

**Immunogen**

A synthetic peptide mapping at the amino acids 202-240 of rat HIF-2 $\alpha$ .

**Lot No.** 08J01

**Purification**

Immunogen affinity purified

**Ig type:** rabbit IgG1

**Size:** 100 $\mu$ g/Vial

**Contents**

Each vial contains 1mg/ml Magnetic Bead in PBS, pH 7.2, 0.05mg NaN<sub>3</sub>.

**Specificity**

Rat.

No cross reactivity with other proteins.

**Storage**

Store at 4°C for frequent use.

**Recommended application**

*Immunoprecipitation(IP)*

**Description:**

This Antagene antibody is immobilized by the covalent reaction of hydrazinonicotinamide-modified antibody with formylbenzamide-modified magnetic beads. It is useful for immunoprecipitation

#### **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 event<sup>1</sup>. 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 hypoxia<sup>2</sup>. HIF2A is expressed at relatively higher levels in villus sections of placenta and in lung samples compared with other tissues examined<sup>3</sup>. 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 duration<sup>4</sup>.

#### **REFERENCE**

1. Tian, H.; McKnight, S. L.; Russell, D. W. : Endothelial PAS domain protein 1 (EPAS1), a transcription factor selectively expressed in endothelial cells. *Genes Dev.* 11: 72-82, 1997.
2. Tian, H.; McKnight, S. L.; Russell, D. W. : Endothelial PAS domain protein 1 (EPAS1), a transcription factor selectively expressed in endothelial cells. *Genes Dev.* 11: 72-82, 1997.
3. Sood, R.; Zehnder, J. L.; Druzin, M. L.; Brown, P. O. : Gene expression patterns in human placenta. *Proc. Nat. Acad. Sci.* 103: 5478-5483, 2006.

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4. Henderson, J.; Withford-Cave, J. M.; Duffy, D. L.; Cole, S. J.; Sawyer, N. A.; Gulbin, J. P.; Hahn, A.; Trent, R. J.; Yu, B. : The EPAS1 gene influences the aerobic-anaerobic contribution in elite endurance athletes. Hum. Genet. 118: 416-423, 2005.