Datasheet for ABIN968355

anti-ARNT antibody (AA 461-574)

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Overview

Quantity:	50 µg
Target:	ARNT
Binding Specificity:	AA 461-574
Reactivity:	Human, Mouse, Rat
Host:	Mouse
Clonality:	Monoclonal
Conjugate:	This ARNT antibody is un-conjugated
Application:	Western Blotting (WB), Immunofluorescence (IF)

Product Details

Immunogen:	Human HIF-1beta/ARNT1 aa. 461-574
Clone:	29-HIF
Isotype:	IgG1
Cross-Reactivity:	Mouse (Murine), Rat (Rattus)
Characteristics:	1. Since applications vary, each investigator should titrate the reagent to obtain optimal results. 2. Please refer to us for technical protocols. 3. Caution: Sodium azide yields highly toxic hydrazoic acid under acidic conditions. Dilute azide compounds in running water before discarding to avoid accumulation of potentially explosive deposits in plumbing. 4. Source of all serum proteins is from USDA inspected abattoirs located in the United States.
Purification:	The monoclonal antibody was purified from tissue culture supernatant or ascites by affinity

Product Details

	chromatography.

Target Details

Target:	ARNT
Alternative Name:	HIF-1beta (ARNT Products)
Background:	The Ah-receptor (AHR) is a ligand activated transcription factor that mediates the biological effects of agonists. AHR dimerizes with a structurally related protein known as ARNT (arylhydrocarbon-receptor nuclear transducer). This heterodimer binds enhancer elements and induces the expression of target genes, specifically those involved in the metabolism of xenobiotics. ARNT1 and ARNT2 are members of the basic-helix-loop-helix-PAS family of heterodimeric transcription factors, which also includes AHR, hypoxia-inducible factor-1alpha (HIF-1alpha), and the Drosophila single-minded protein (Sim). While ARNT2 expression is limited to brain and kidney, ARNT1 exhibits ubiquitous expression. A targeted disruption of the Arnt locus in the mouse yields embryonic stem cells that fail to activate genes that normally respond to low oxygen tension. Arnt -/- embryos do not survive and show defective angiogenesis of the yolk sac and branchial arches, stunted development, and wasting. Thus, in addition to its regulation of xenobiotic metabolism genes, ARNT is thought to induce developmental gene expression resulting in vascularization of the developing embryo.
Molecular Weight:	95 kDa
Pathways:	Regulation of Hormone Metabolic Process, Regulation of Hormone Biosynthetic Process, Regulation of Carbohydrate Metabolic Process, Signaling Events mediated by VEGFR1 and VEGFR2, Warburg Effect

Application Details

Comment:	Related Products: ABIN968537, ABIN967389
Restrictions:	For Research Use only

Handling

Format:	Liquid
Concentration:	250 µg/mL
Buffer:	Aqueous buffered solution containing BSA, glycerol, and ≤0.09 % sodium azide.
Preservative:	Sodium azide

Handling

Precaution of Use:	This product contains Sodium azide: a POISONOUS AND HAZARDOUS SUBSTANCE which should be handled by trained staff only.
Storage:	-20 °C
Storage Comment:	Store undiluted at -20°C.

Publications

Product cited in:

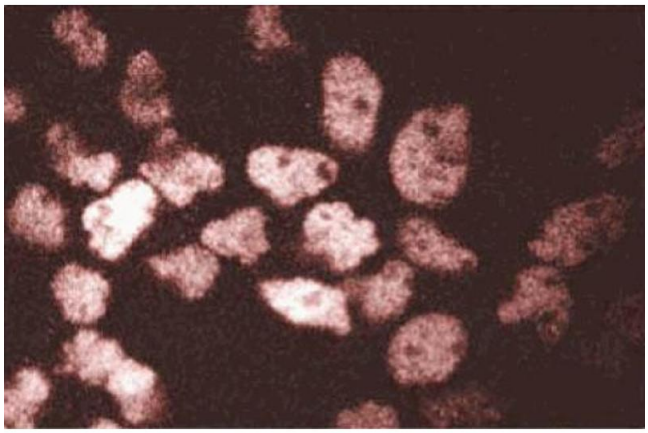
Ambrosini, Nath, Sierra-Honigmann, Flores-Riveros: "Transcriptional activation of the human leptin gene in response to hypoxia. Involvement of hypoxia-inducible factor 1." in: **The Journal of biological chemistry**, Vol. 277, Issue 37, pp. 34601-9, (2002) (PubMed).

Jiang, Jiang, Zheng, Lu, Hunter, Vogt: "Phosphatidylinositol 3-kinase signaling controls levels of hypoxia-inducible factor 1." in: **Cell growth & differentiation : the molecular biology journal of the American Association for Cancer Research**, Vol. 12, Issue 7, pp. 363-9, (2001) (PubMed).

Suzuki, Tomida, Tsuruo: "Dephosphorylated hypoxia-inducible factor 1alpha as a mediator of p53-dependent apoptosis during hypoxia." in: **Oncogene**, Vol. 20, Issue 41, pp. 5779-88, (2001) (PubMed).

Maltepe, Schmidt, Baunoch, Bradfield, Simon: "Abnormal angiogenesis and responses to glucose and oxygen deprivation in mice lacking the protein ARNT." in: **Nature**, Vol. 386, Issue 6623, pp. 403-7, (1997) (PubMed).

Drutel, Kathmann, Heron, Schwartz, Arrang: "Cloning and selective expression in brain and kidney of ARNT2 homologous to the Ah receptor nuclear translocator (ARNT)." in: **Biochemical and biophysical research communications**, Vol. 225, Issue 2, pp. 333-9, (1996) (PubMed).



Immunofluorescence

Image 1. Immunofluorescent staining of A431 cells.

Western Blotting

Image 2. Western blot analysis of HIF-1beta/ARNT1 on Jurkat cell lysate. Lane 1: 1:1000, lane 2: 1:2000, lane 3: 1:4000 dilution of anti-HIF-1beta.