SANTA CRUZ BIOTECHNOLOGY, INC.

HIF-1α (H-206): sc-10790

SANTA CRUZ BIOTECHNOLOGY
The Power to Question

BACKGROUND

Cell growth and viability is compromised by oxygen deprivation (hypoxia). Hypoxia-inducible factors, including HIF-1α, Arnt 1 (also designated HIF-1β), EPAS-1 (also designated HIF-2α) and HIF-3α, induce glycolysis, erythropoiesis and angiogenesis in order to restore oxygen homeostasis. Hypoxia-inducible factors are members of the Per-Arnt-Sim (PAS) domain transcription factor family. In response to hypoxia, HIF-1α is upregulated and forms a heterodimer with Arnt 1 to form the HIF-1 complex. The HIF-1 complex recognizes and binds to the hypoxia responsive element (HRE) of hypoxia-inducible genes, thereby activating transcription. Hypoxia-inducible expression of some genes, such as Glut-1, p53, p21 or Bcl-2, is HIF-1α dependent, whereas expression of others, such as p27, GADD 153 or HO-1, is HIF-1α independent. EPAS-1 and HIF-3α have also been shown to form heterodimeric complexes with Arnt 1 in response to hypoxia.

CHROMOSOMAL LOCATION

Genetic locus: HIF1A (human) mapping to 14q23.2; Hif1a (mouse) mapping to 12 C3.

SOURCE

HIF-1α (H-206) is a rabbit polyclonal antibody raised against amino acids 575-780 of HIF-1α of human origin.

PRODUCT

Each vial contains 200 µg IgG in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin.

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-10790 X, 200 µg/0.1 ml.

APPLICATIONS

HIF-1α (H-206) is recommended for detection of HIF-1α of mouse, rat and human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000), immunoprecipitation [1-2 µg per 100-500 µg of total protein (1 ml of cell lysate)], immunofluorescence (starting dilution 1:50, dilution range 1:50-1:500) and solid phase ELISA (starting dilution 1:30, dilution range 1:30-1:3000).

HIF-1α (H-206) is also recommended for detection of HIF-1α in additional species, including canine and bovine.

Suitable for use as control antibody for HIF-1α siRNA (h): sc-35561, HIF-1α siRNA (m): sc-35562, HIF-1α shRNA Plasmid (h): sc-35561-SH, HIF-1α shRNA Plasmid (m): sc-35562-SH, HIF-1α shRNA (h) Lentiviral Particles: sc-35561-V and HIF-1α shRNA (m) Lentiviral Particles: sc-35562-V.

HIF-1α (H-206) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HIF-1α: 132 kDa.

Positive Controls: K-562 whole cell lysate: sc-2203.

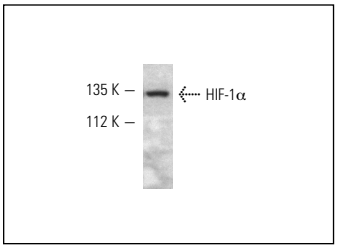
RESEARCH USE

For research use only, not for use in diagnostic procedures.

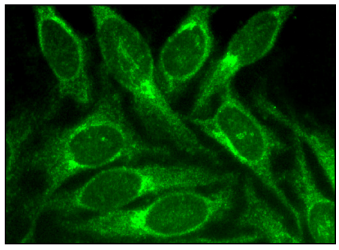
STORAGE

Store at 4° C, **DO NOT FREEZE**. Stable for one year from the date of shipment. Non-hazardous. No MSDS required.

DATA



HIF-1α (H-206): sc-10790. Western blot analysis of HIF-1α expression in K-562 whole cell lysate.



HIF-1α (H-206): sc-10790. Immunofluorescence staining of methanol-fixed HeLa cells showing cytoplasmic, perinuclear and nuclear localization.

SELECT PRODUCT CITATIONS

1. Soucek, T., et al. 2003. The regulation of glucose metabolism by HIF-1 mediates a neuroprotective response to amyloid β peptide. Neuron 39: 43-56.
2. Yoo, Y.G., et al. 2003. Hepatitis B virus X protein enhances transcriptional activity of hypoxia-inducible factor-1α through activation of mitogen-activated protein kinase pathway. J. Biol. Chem. 278: 39076-39084.
3. Yuan, H.T., et al. 2003. Peritubular capillary loss after mouse acute nephrotoxicity correlates with down-regulation of vascular endothelial growth factor-A and hypoxia-inducible factor-1α. Am. J. Pathol. 163: 2289-2301.
4. Pennacchietti, S. 2003. Hypoxia promotes invasive growth by transcriptional activation of the met protooncogene. Cancer Cell 3: 347-361.
5. Siddavaram, N., et al. 2012. Chlorophyllin abrogates canonical Wnt/β-catenin signaling and angiogenesis to inhibit the development of DMBA-induced hamster cheek pouch carcinomas. Cell. Oncol. 35: 385-395.
6. Ryou, M.G., et al. 2012. Pyruvate protects the brain against ischemia-reperfusion injury by activating the erythropoietin signaling pathway. Stroke 43: 1101-1107.
7. Lee, J.H., et al. 2013. $CoCl_2$ induces apoptosis through the mitochondria- and death receptor-mediated pathway in the mouse embryonic stem cells. Mol. Cell. Biochem. 379: 133-140.
8. Isaacs, J.T., et al. 2013. Tasquinimod is an allosteric modulator of HDAC4 survival signaling within the compromised cancer microenvironment. Cancer Res. 73: 1386-1399.

MONOS Satisfaction Guaranteed

Try **HIF-1α (28b): sc-13515** or **HIF-1α (H1α 67): sc-53546**, our highly recommended monoclonal alternatives to HIF-1α (H-206). Also, for AC, HRP, FITC, PE, Alexa Fluor® 488 and Alexa Fluor® 647 conjugates, see **HIF-1α (28b): sc-13515**.