SANTA CRUZ BIOTECHNOLOGY, INC.

HIF-3α (C-18): sc-32144

SANTA CRUZ BIOTECHNOLOGY

The Power to Question

BACKGROUND

Cell growth and viability is compromised by oxygen deprivation (hypoxia). Hypoxia-inducible factors, including HIF-1α, HIF-1β (also designated Arnt 1), 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.

REFERENCES

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3. Luo, G., Gu, Y.Z., Jain, S., Chan, W.K., Carr, K.M., Hogenesch, J.B. and Bradfield, C.A. 1997. Molecular characterization of the murine HIF-1α locus. Gene Expr. 6: 287-299.
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5. Gu, Y.Z., Moran, S.M., Hogenesch, J.B., Wartman, L. and Bradfield, C.A. 1998. Molecular characterization and chromosomal localization of a third α-class hypoxia inducible factor subunit, HIF-3 α. Gene Expr. 7: 205-213.
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CHROMOSOMAL LOCATION

Genetic locus: HIF3A (human) mapping to 19q13.32.

STORAGE

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

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

HIF-3α (C-18) is an affinity purified goat polyclonal antibody raised against a peptide mapping near the C-terminus of HIF-3α 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.

Blocking peptide available for competition studies, sc-32144 P, (100 µg peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% BSA).

Available as TransCruz reagent for Gel Supershift and ChIP applications, sc-32144 X, 200 µg/0.1 ml.

APPLICATIONS

HIF-3α (C-18) is recommended for detection of HIF-3α of 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).

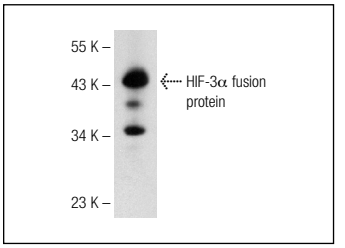
Suitable for use as control antibody for HIF-3α siRNA (h): sc-38167, HIF-3α shRNA Plasmid (h): sc-38167-SH and HIF-3α shRNA (h) Lentiviral Particles: sc-38167-V.

HIF-3α (C-18) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HIF-3α: 73 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

DATA



HIF-3α (C-18): sc-32144. Western blot analysis of human recombinant HIF-3α fusion protein.

RESEARCH USE

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