

HIF-3 α (E-8): sc-390933

BACKGROUND

Cell growth and viability is compromised by oxygen deprivation (hypoxia). Hypoxia-inducible factors, including HIF-1 α , HIF-1 β (also designated Arnt, EPAS-1 (also designated HIF-2 α) and HIF-3 α , 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-1 α 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-1 α dependent, whereas expression of others, such as p27, GADD 153 or HO-1, is HIF-1 α independent. EPAS-1 and HIF-3 α have also been shown to form heterodimeric complexes with Arnt 1 in response to hypoxia.

CHROMOSOMAL LOCATION

Genetic locus: HIF3A (human) mapping to 19q13.32; Hif3a (mouse) mapping to 7 A2.

SOURCE

HIF-3 α (E-8) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 612-639 near the C-terminus of HIF-3 α of mouse origin.

PRODUCT

Each vial contains 200 μ g IgM kappa light chain in 1.0 ml of PBS with < 0.1% sodium azide and 0.1% gelatin. Also available as TransCruz reagent for Gel Supershift and ChIP applications, sc-390933 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-390933 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HIF-3 α (E-8) is recommended for detection of HIF-3 α of mouse, rat and human origin by Western Blotting (starting dilution 1:100, dilution range 1:100-1:1000), immunoprecipitation [1-2 μ g per 100-500 μ g 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-3 α siRNA (h): sc-38167, HIF-3 α siRNA (m): sc-38168, HIF-3 α shRNA Plasmid (h): sc-38167-SH, HIF-3 α shRNA Plasmid (m): sc-38168-SH, HIF-3 α shRNA (h) Lentiviral Particles: sc-38167-V and HIF-3 α shRNA (m) Lentiviral Particles: sc-38168-V.

HIF-3 α (E-8) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

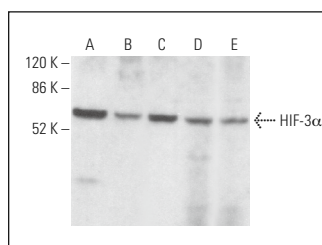
Molecular Weight of HIF-3 α : 73 kDa.

Positive Controls: Y79 cell lysate: sc-2240, C6 whole cell lysate: sc-364373 or HEK293 whole cell lysate: sc-45136.

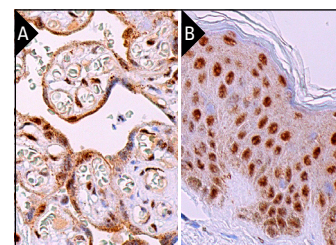
RECOMMENDED SUPPORT REAGENTS

To ensure optimal results, the following support reagents are recommended: 1) Western Blotting: use m-IgG κ BP-HRP: sc-516102 or m-IgG κ BP-HRP (Cruz Marker): sc-516102-CM (dilution range: 1:1000-1:10000), Cruz Marker™ Molecular Weight Standards: sc-2035, UltraCruz® Blocking Reagent: sc-516214 and Western Blotting Luminol Reagent: sc-2048. 2) Immunoprecipitation: use Protein L-Agarose: sc-2336 (0.5 ml agarose/2.0 ml). 3) Immunofluorescence: use m-IgG κ BP-FITC: sc-516140 or m-IgG κ BP-PE: sc-516141 (dilution range: 1:50-1:200) with UltraCruz® Mounting Medium: sc-24941 or UltraCruz® Hard-set Mounting Medium: sc-359850.

DATA



HIF-3 α (E-8): sc-390933. Western blot analysis of HIF-3 α expression in Y79 (A), C6 (B) and HEK293 (C) whole cell lysates and rat liver (D) and rat brain (E) tissue extracts. Detection reagent used: m-IgG κ BP-HRP: sc-516102.



HIF-3 α (E-8): sc-390933. Immunoperoxidase staining of formalin fixed, paraffin-embedded human placenta tissue showing nuclear staining of trophoblastic cells (A). Immunoperoxidase staining of formalin fixed, paraffin-embedded human skin tissue showing nuclear staining of keratinocytes, fibroblasts, Langerhans cells and melanocytes (B).

SELECT PRODUCT CITATIONS

- Janjic, K., et al. 2018. Do hypoxia and L-mimosine modulate sclerostin and dickkopf-1 production in human dental pulp-derived cells? Insights from monolayer, spheroid and tooth slice cultures. BMC Oral Health 18: 36.
- Cuomo, F., et al. 2018. Pro-inflammatory cytokines activate hypoxia-inducible factor 3 α via epigenetic changes in mesenchymal stromal/stem cells. Sci. Rep. 8: 5842.
- D'Amico, A.G., et al. 2021. Modulatory role of PACAP and VIP on HIFs expression in lung adenocarcinoma. Peptides 146: 170672.

STORAGE

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

RESEARCH USE

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

PROTOCOLS

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