

HIF-3 α (D-7): sc-390769

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.

REFERENCES

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5. Gu, Y.Z., et al. 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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7. Choi, K.S., et al. 2003. Hypoxia-induced angiogenesis during carcinogenesis. *J. Biochem. Mol. Biol.* 36: 120-127.
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CHROMOSOMAL LOCATION

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

SOURCE

HIF-3 α (D-7) is a mouse monoclonal antibody specific for an epitope mapping between amino acids 619-640 of HIF-3 α of mouse origin.

STORAGE

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

PRODUCT

Each vial contains 200 μ g IgG_{2b} 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-390769 X, 200 μ g/0.1 ml.

Blocking peptide available for competition studies, sc-390769 P, (100 μ g peptide in 0.5 ml PBS containing < 0.1% sodium azide and 0.2% stabilizer protein).

APPLICATIONS

HIF-3 α (D-7) is recommended for detection of HIF-3 α 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 (D-7) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of HIF-3 α : 73 kDa.

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 A/G PLUS-Agarose: sc-2003 (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.

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.