SANTA CRUZ BIOTECHNOLOGY, INC.

EPAS-1 (A-5): sc-46691

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.

CHROMOSOMAL LOCATION

Genetic locus: EPAS1 (human) mapping to 2p21.

SOURCE

EPAS-1 (A-5) is a mouse monoclonal antibody raised against amino acids 556-865 of EPAS-1 of human origin.

PRODUCT

Each vial contains 200 µg 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-46691 X, 200 µg/0.1 ml.

EPAS-1 (A-5) is available conjugated to agarose (sc-46691 AC), 500 µg/0.25 ml agarose in 1 ml, for IP; to HRP (sc-46691 HRP), 200 µg/ml, for WB, IHC(P) and ELISA; to either phycoerythrin (sc-46691 PE), fluorescein (sc-46691 FITC), Alexa Fluor® 488 (sc-46691 AF488), Alexa Fluor® 546 (sc-46691 AF546), Alexa Fluor® 594 (sc-46691 AF594) or Alexa Fluor® 647 (sc-46691 AF647), 200 µg/ml, for WB (RGB), IF, IHC(P) and FCM; and to either Alexa Fluor® 680 (sc-46691 AF680) or Alexa Fluor® 790 (sc-46691 AF790), 200 µg/ml, for Near-Infrared (NIR) WB, IF and FCM.

APPLICATIONS

EPAS-1 (A-5) is recommended for detection of EPAS-1 of human origin by Western Blotting (starting dilution 1:100, 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 EPAS-1 siRNA (h): sc-35316, EPAS-1 shRNA Plasmid (h): sc-35316-SH and EPAS-1 shRNA (h) Lentiviral Particles: sc-35316-V.

EPAS-1 (A-5) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

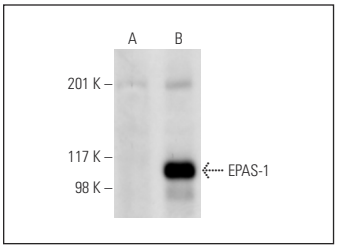
Molecular Weight of EPAS-1: 115 kDa.

Positive Controls: A549 cell lysate: sc-2413, HeLa + $CoCl_2$ cell lysate: sc-24679 or HT-1080 whole cell lysate: sc-364183.

STORAGE

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

DATA



EPAS-1 (A-5): sc-46691. Western blot analysis of EPAS-1 expression in untreated (**A**) and $CoCl_2$-treated (**B**) HeLa whole cell lysates.

SELECT PRODUCT CITATIONS

1. Hofmann, N.A., et al. 2012. Oxygen sensing mesenchymal progenitors promote neo-vasculogenesis in a humanized mouse model *in vivo*. PLoS ONE 7: e44468.
2. Markway, B.D., et al. 2013. Hypoxia promotes redifferentiation and suppresses markers of hypertrophy and degeneration in both healthy and osteoarthritic chondrocytes. Arthritis Res. Ther. 15: R92.
3. Labrecque, M.P., et al. 2014. A TRIP230-retinoblastoma protein complex regulates hypoxia-inducible factor-1α-mediated transcription and cancer cell invasion. PLoS ONE 9: e99214.
4. Marín-Ramos, N.I., et al. 2015. New inhibitors of angiogenesis with antitumor activity *in vivo*. J. Med. Chem. 58: 3757-3766.
5. Wallace, E.M., et al. 2016. A small-molecule antagonist of HIF2α is efficacious in preclinical models of renal cell carcinoma. Cancer Res. 76: 5491-5500.
6. Di Luca, A., et al. 2016. Influencing chondrogenic differentiation of human mesenchymal stromal cells in scaffolds displaying a structural gradient in pore size. Acta Biomater. 36: 210-219.
7. Chen, W., et al. 2016. Targeting renal cell carcinoma with a HIF-2 antagonist. Nature 539: 112-117.
8. Bondanese, V.P., et al. 2016. Hypoxia induces copper stable isotope fractionation in hepatocellular carcinoma, in a HIF-independent manner. Metallomics 8: 1177-1184.
9. Courtney, K.D., et al. 2020. HIF-2 complex dissociation, target inhibition, and acquired resistance with PT2385, a first-in-class HIF-2 inhibitor, in patients with clear cell renal cell carcinoma. Clin. Cancer Res. 26: 793-803.

RESEARCH USE

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