SANTA CRUZ BIOTECHNOLOGY, INC.

EPAS-1 (H-310): sc-28706

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; Epas1 (mouse) mapping to 17 E4.

SOURCE

EPAS-1 (H-310) is a rabbit polyclonal antibody raised against amino acids 556-865 mapping near the C-terminus of EPAS-1 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-28706 X, 200 µg/0.1 ml.

APPLICATIONS

EPAS-1 (H-310) is recommended for detection of EPAS-1 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), immunohistochemistry (including paraffin-embedded sections) (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 siRNA (m): sc-35317, EPAS-1 shRNA Plasmid (h): sc-35316-SH, EPAS-1 shRNA Plasmid (m): sc-35317-SH, EPAS-1 shRNA (h) Lentiviral Particles: sc-35316-V and EPAS-1 shRNA (m) Lentiviral Particles: sc-35317-V.

EPAS-1 (H-310) X TransCruz antibody is recommended for Gel Supershift and ChIP applications.

Molecular Weight of EPAS-1: 115 kDa.

Positive Controls: HeLa + $CoCl_2$ cell lysate: sc-24679, A549 cell lysate: sc-2413 or EPAS-1 (m): 293T Lysate: sc-120061.

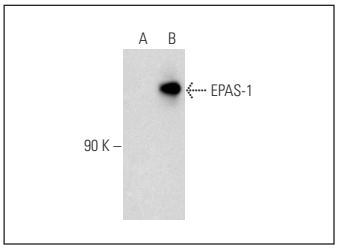
RESEARCH USE

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

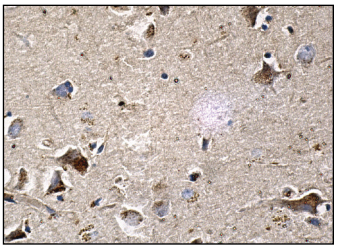
STORAGE

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

DATA



EPAS-1 (H-310): sc-28706. Western blot analysis of EPAS-1 expression in non-transfected: sc-117752 (**A**) and mouse EPAS-1 transfected: sc-120061 (**B**) 293T whole cell lysates.



EPAS-1 (H-310): sc-28706. Immunoperoxidase staining of formalin fixed, paraffin-embedded human brain tissue showing cytoplasmic and nuclear staining of neuronal cells.

SELECT PRODUCT CITATIONS

1. Huang, J., et al. 2007. IOP1, a novel hydrogenase-like protein that modulates hypoxia-inducible factor-1α activity. Biochem. J. 401: 341-352.
2. Gao, P., et al. 2007. HIF-dependent antitumorigenic effect of antioxidants *in vivo*. Cancer Cell 12: 230-238.
3. Qiao, H., et al. 2008. Development of ascorbate transporters in brain cortical capillary endothelial cells in culture. Brain Res. 1208: 79-86.
4. Francis, K.R. and Wei, L. 2010. Human embryonic stem cell neural differentiation and enhanced cell survival promoted by hypoxic preconditioning. Cell Death Dis. 1: e22.
5. Stachurska, A., et al. 2011. Aristolochic acid I and ochratoxin A differentially regulate VEGF expression in porcine kidney epithelial cells-The involvement of SP-1 and HIFs transcription factors. Toxicol. Lett. 204: 118-126.
6. Florczyk, U., et al. 2011. Opposite effects of HIF-1α and HIF-2α on the regulation of IL-8 expression in endothelial cells. Free Radic. Biol. Med. 51: 1882-1892.

PROTOCOLS

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