

PRODUCT INFORMATION



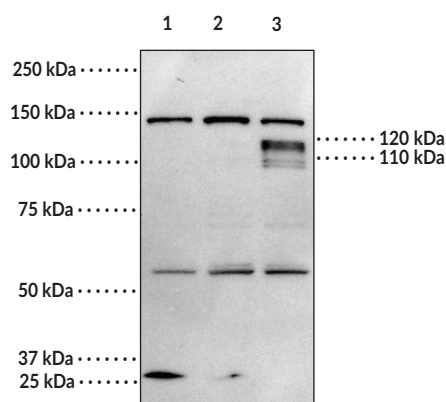
HIF-1 α (C-Term) Polyclonal Antibody

Item No. 10006421

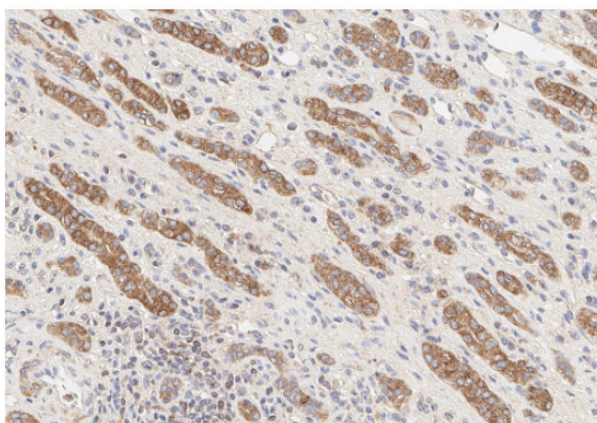
Overview and Properties

Contents: This vial contains 500 μ l of peptide affinity-purified antibody.
Synonyms: Hypoxia-Inducible Factor-1 α
Immunogen: Peptide from the C-terminal region of human HIF-1 α
Species Reactivity: (+) Human, mouse, and simian; other species not tested
Uniprot No.: Q16665
Form: Liquid
Storage: -20°C (as supplied)
Stability: \geq 1 year
Storage Buffer: PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
Host: Rabbit
Applications: Immunohistochemistry (IHC) and Western blot (WB)*; the recommended starting dilution for IHC is 1:40 and 1:200 for WB for 1 hour incubation at room temperature when probing total cell lysates. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically. *6-8 % acrylamide gels (SDS-PAGE) are recommended for loading gels with HIF-1 α containing samples to allow maximal separation of high molecular weight proteins with similar M_r .

Images



Lane 1: Cos cell lysate (30 μ g)
Lane 2: Cos cell lysate (40 μ g)
Lane 3: CoCl₂ treated Cos cell lysate (30 μ g)



Immunohistochemistry analysis of formalin-fixed, paraffin-embedded (FFPE) human kidney tissue after heat induced antigen retrieval in pH, 6.0 citrate buffer. After incubation with HIF-1 α (C-Term) Polyclonal Antibody (Item No. 10006421), at a 1:40 dilution, slides were incubated with biotinylated secondary antibody, followed by alkaline phosphatase-streptavidin and chromogen (DAB).

WARNING
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

SAFETY DATA
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the complete Safety Data Sheet, which has been sent via email to your institution.

WARRANTY AND LIMITATION OF REMEDY
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

Copyright Cayman Chemical Company, 10/25/2019

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM

PRODUCT INFORMATION



Description

Hypoxia-inducible factor-1 α (HIF-1 α) is a transcription factor that accumulates under low-oxygen conditions.^{1,2} Following hypoxic stimulus and cytoplasmic accumulation, HIF-1 α migrates to the nucleus where, with other transcription factors, it drives the production of stress-adaptive proteins. This response is essential for maintenance of normal oxidative physiology, however overexpression in cancer cells promotes tumor survival.²⁻⁶ HIF-1 α is an endothelial PAS domain protein 1 (EPAS-1) family member with phosphorylation dependent activities. HIF-1 α will migrate to the apparent molecular weights of 110-125 kDa (by SDS-PAGE) depending on phosphorylation status.^{7,8} This vial contains peptide affinity-purified IgG directed against the C-terminus of HIF-1 α . The antibody should be stored at -20°C as supplied. Positive controls include human, primate, and mouse cell cultures grown in hypoxic conditions or treated with prolyl hydroxylase inhibitors such as DMOG (Item No. 71210), 2,4-DPD (Item No. 71200), desferrioxamine, or cobalt chloride.^{6,9}

References

1. Wenger, R.H. Cellular adaptation to hypoxia: O₂-sensing protein hydroxylases, hypoxia-inducible transcription factors, and O₂-regulated gene expression. *FASEB J.* **16(10)**, 1151-1162 (2002).
2. Wang, G.L., Jiang, B.-H., Rue, E.A., *et al.* Hypoxia-inducible factor 1 is a basic-helix-loop-helix-PAS heterodimer regulated by cellular O₂ tension. *Proc. Natl. Acad. Sci. USA* **92(12)**, 5510-5514 (1995).
3. Talks, K.L., Turley, H., Gatter, K.C., *et al.* The expression and distribution of the hypoxia-inducible factors HIF-1 α and HIF-2 α in normal human tissues, cancers, and tumor-associated macrophages. *Am. J. Pathol.* **157(2)**, 411-421 (2000).
4. Koukourakis, M.I., Giatromanolaki, A., Skarlatos, J., *et al.* Hypoxia inducible factor (HIF-1 α and HIF-2 α) expression in early esophageal cancer and response to photodynamic therapy and radiotherapy. *Cancer Res.* **61(5)**, 1830-1832 (2001).
5. Blancher, C., Moore, J.W., Talks, K.L., *et al.* Relationship of hypoxia-inducible factor (HIF)-1 α and HIF-2 α expression to vascular endothelial growth factor induction and hypoxia survival in human breast cancer cell lines. *Cancer Res.* **60(24)**, 7106-7113 (2000).
6. Ambrosin, G., Nath, A.K., Sierra-Honigmann, M.R., *et al.* Transcriptional activation of the human leptin gene in response to hypoxia. Involvement of hypoxia-inducible factor 1. *J. Biol. Chem.* **277(37)**, 34601-34609 (2002).
7. Richard, D.E., Berra, E., Gothié, E., *et al.* p42/p44 mitogen-activated protein kinases phosphorylate hypoxia-inducible factor 1 α (HIF-1 α) and enhance the transcriptional activity of HIF-1. *J. Biol. Chem.* **274(46)**, 32631-32637 (1999).
8. Liu, X.H., Kirschenbaum, A., Lu, M., *et al.* Prostaglandin E₂ induces hypoxia-inducible factor-1 α stabilization and nuclear localization in a human prostate cancer cell line. *J. Biol. Chem.* **277(51)**, 50081-50086 (2002).
9. Lando, D., Peet, D.J., Whelan, D.A., *et al.* Asparagine hydroxylation of the HIF transactivation domain a hypoxic switch. *Science* **295(5556)**, 858-861 (2002).

CAYMAN CHEMICAL
1180 EAST ELLSWORTH RD
ANN ARBOR, MI 48108 · USA
PHONE: [800] 364-9897
[734] 971-3335
FAX: [734] 971-3640
CUSTSERV@CAYMANCHEM.COM
WWW.CAYMANCHEM.COM