Product Datasheet

KLF4 Antibody - BSA Free

NBP1-83940

Unit Size: 0.1 ml

Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.

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Reviews: 2 Publications: 12

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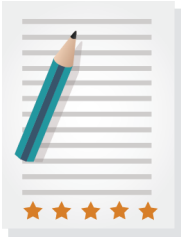
Updated 3/4/2026 v.20.1



NBP1-83940

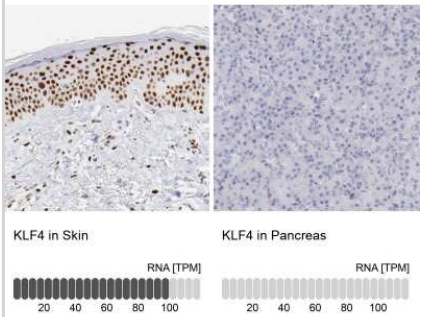
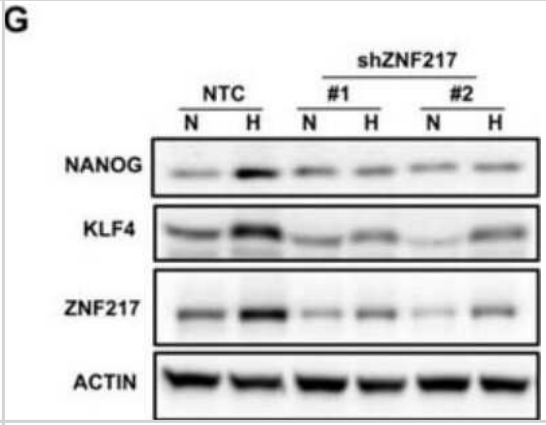
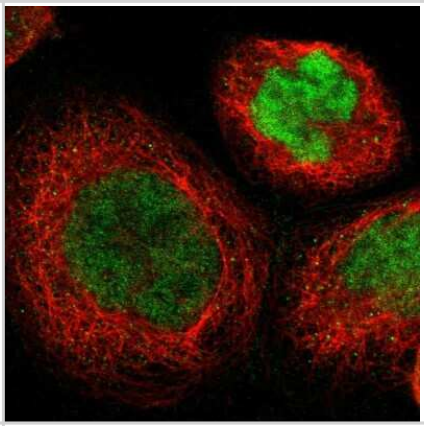
KLF4 Antibody - BSA Free

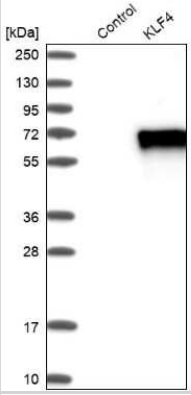
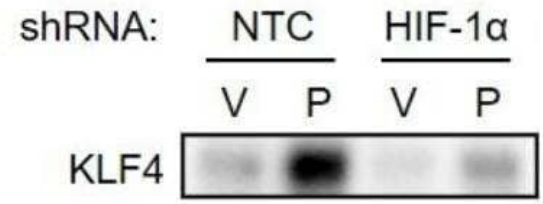
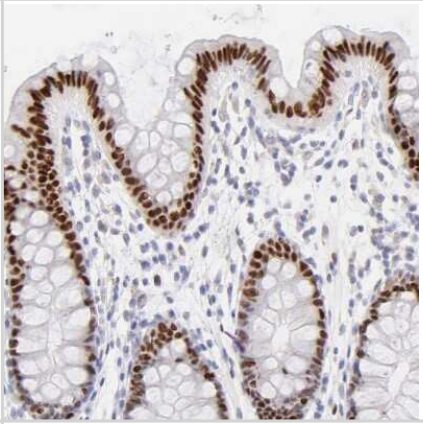
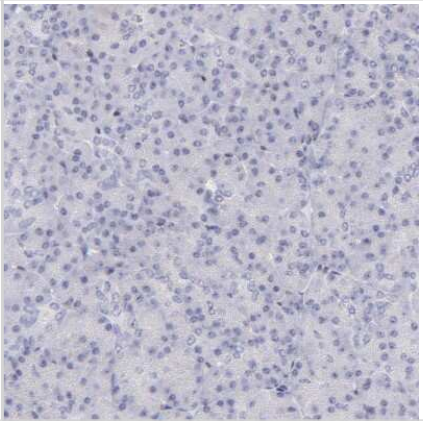
Product Information	
Unit Size	0.1 ml
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Affinity purified
Buffer	PBS (pH 7.2) and 40% Glycerol
Target Molecular Weight	56 kDa

Product Description	
Host	Rabbit
Gene ID	9314
Gene Symbol	KLF4
Species	Human
Reactivity Notes	Immunogen displays the following percentage of sequence identity for non-tested species: Mouse (89%), Rat (89).
Immunogen	This antibody was developed against Recombinant Protein corresponding to amino acids: ETEEFNDLLDLDFILSNSLTHPPESVAATVSSSASASSSSSPSSSGPASAPSTC SFTYPIRAGNDPGVAPGGTGGGLLYGRESAPPPTAPFNLADINDVSP

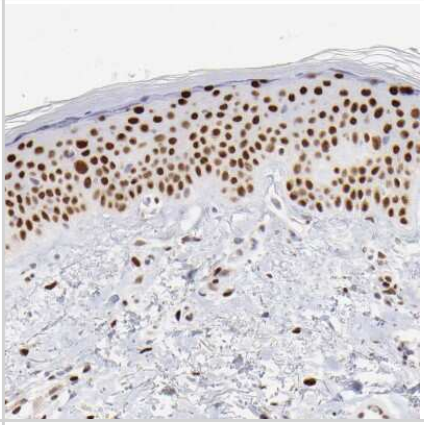
Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP), Chromatin Immunoprecipitation-exo-Seq, Knockdown Validated
Recommended Dilutions	Western Blot 0.04-0.4 ug/ml, Immunohistochemistry 1:1000 - 1:2500, Immunocytochemistry/ Immunofluorescence 0.25-2 ug/ml, Immunoprecipitation Reported in scientific literature (PMID: 25228645)., Immunohistochemistry-Paraffin 1:1000 - 1:2500, Chromatin Immunoprecipitation (ChIP) Reported in scientific literature (PMID: 25228645)., Knockdown Validated Reported in scientific publication (PMID: 32427586)., Chromatin Immunoprecipitation-exo-Seq 1-10ug per reaction
Application Notes	For IHC-Paraffin, HIER pH 6 retrieval is recommended. ICC/IF, fixation/permeabilization: PFA/Triton X-100.

Images

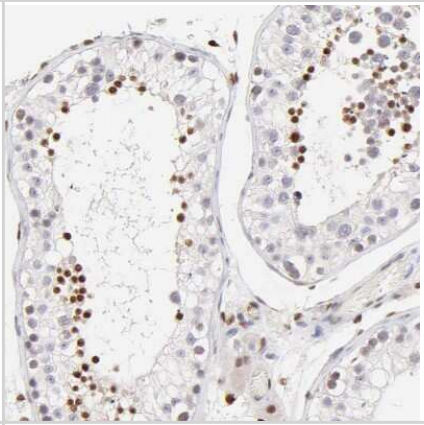
Immunohistochemistry-Paraffin: KLF4 Antibody [NBP1-83940] - Staining in human skin and pancreas tissues. Corresponding KLF4 RNA-seq data are presented for the same tissues.	
KLF4-Antibody-Western-Blot-NBP1-83940-img0025.jpg	
Immunocytochemistry/Immunofluorescence: KLF4 Antibody [NBP1-83940] - Staining of human cell line A-431 shows localization to nucleoplasm. Antibody staining is shown in green.	
Western Blot: KLF4 Antibody [NBP1-83940] - Human breast cancer cell MCF-7 was treated with carboplatin, alone or in combination with Stat3 inhibitor, for 72 hours, and the expression of Klf4 was detected by Western blot. WB image submitted by a verified customer review.	

Western Blot: KLF4 Antibody [NBP1-83940] - Analysis in control (vector only transfected HEK293T lysate) and KLF4 over-expression lysate (Co-expressed with a C-terminal myc-DDK tag (3.1 kDa) in mammalian HEK293T cells).	
Western Blot: KLF4 Antibody [NBP1-83940] - MDA-MB-231 subclones transfected with NTC or HIF-1 alpha shRNA vector were treated with vehicle (V) or paclitaxel (P) and immunoblot assay was performed. WB image submitted by a verified customer review.	
Immunohistochemistry-Paraffin: KLF4 Antibody [NBP1-83940] - Staining of human colon shows moderate to strong nuclear positivity in glandular cells.	
Immunohistochemistry-Paraffin: KLF4 Antibody [NBP1-83940] - Staining of human pancreas shows no positivity in exocrine glandular cells as expected.	

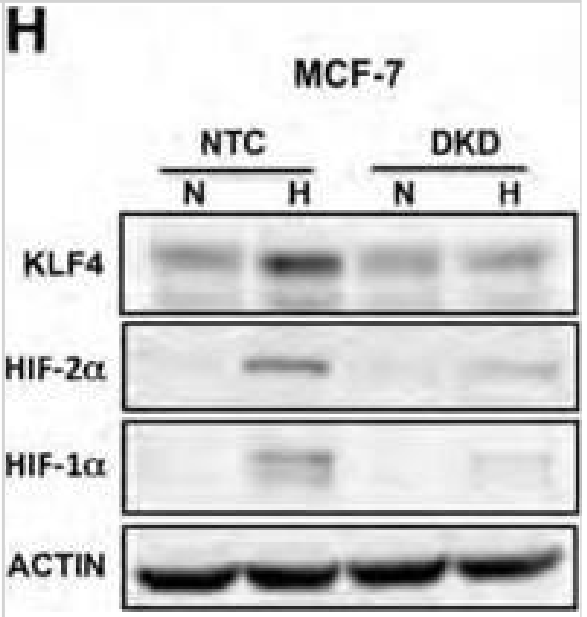
Immunohistochemistry-Paraffin: KLF4 Antibody [NBP1-83940] - Staining of human skin shows moderate to strong nuclear positivity in keratinocytes.



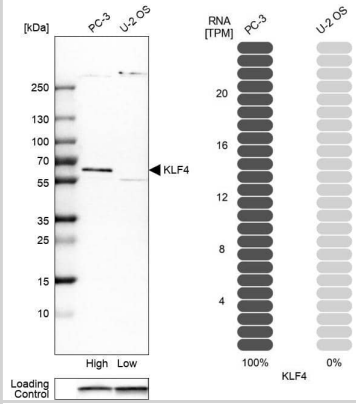
Immunohistochemistry-Paraffin: KLF4 Antibody [NBP1-83940] - Staining of human testis shows moderate to strong nuclear positivity in a subset of cells in seminiferous ducts.



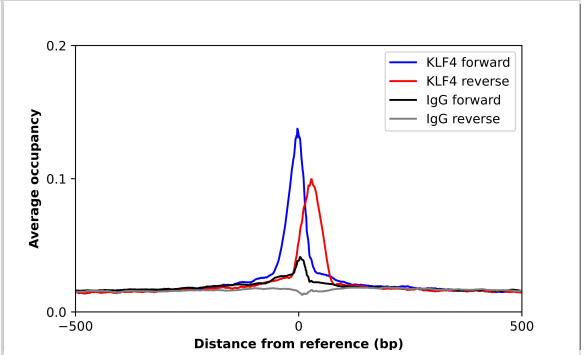
Western Blot: KLF4 Antibody [NBP1-83940] - HIFs are required for hypoxia-induced expression of pluripotency factorsA-C. Breast cancer cell lines were exposed to 20% or 1% O2 for 24 h & NANOG (A), KLF4 (B), & SOX2 (C) mRNA levels were determined by RT-qPCR, relative to 18S rRNA, & normalized to the mean value for MDA-MB-231 cells (MDA231) at 20% O2 (mean ± SEM; n = 3). *P < 0.05, **P < 0.01, ***P < 0.001 vs. same cell line at 20% O2 by Student's t test. D & E. HCC-1954 (D) & MCF-7 (E) subclones, which were stably transfected with an expression vector encoding a non-targeting control (NTC) shRNA, or vector encoding shRNA targeting HIF-1α (sh1α) or HIF-2α (sh2α), or vectors encoding shRNAs targeting both HIF-1α & HIF-2α (DKD), were exposed to 20% or 1% O2 for 24 h & RT-qPCR was performed to determine NANOG (D) or KLF4 (E) mRNA levels relative to 18S rRNA. The results were normalized to NTC at 20% O2 (mean ± SEM; n = 3). *P < 0.05, **P < 0.01, ***P < 0.001 vs. NTC at 20% O2; #P < 0.05, ##P < 0.01, ###P < 0.001 vs. NTC at 1% O2 by ANOVA. F. ZR75.1 cells treated with vehicle or digoxin (200 nM) were exposed to 20% or 1% O2 for 24 h & SOX2 mRNA was measured (mean ± SEM; n = 3). *P < 0.05, **P < 0.01 vs. NTC at 20% O2; ###P < 0.001 vs. NTC at 1% O2 by ANOVA. G & H. NTC & DKD subclones of HCC-1954 (G) & MCF-7 (H) were exposed to 20% or 1% O2 for 48 h, whole cell lysates were prepared, & immunoblot assays were performed to analyze HIF-1α, HIF-2α, NANOG & KLF4 protein expression. Actin was also analyzed as a loading control. I. ZR75.1 cells were treated with vehicle or digoxin (200 nM), exposed to 20% or 1% O2 for 48 h, & HIF-1α, NANOG & SOX2 immunoblot assays were performed. Image collected & cropped by CiteAb from the following publication (https://www.oncotarget.com/lookup/doi/10.18632/oncotarget.11743), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



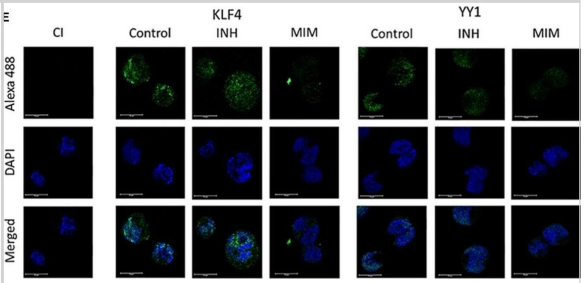
Analysis in human cell lines PC-3 and U2OS using Anti-KLF4 antibody. Corresponding KLF4 RNA-seq data are presented for the same cell lines. Loading control: Anti-GAPDH.



ChIP-Exo-Seq composite graph for Anti-KLF4 (NBP1-83940) tested in NCCIT cells. Strand-specific reads (blue: forward, red: reverse) and IgG controls (black: forward, grey: reverse) are plotted against the distance from a composite set of reference binding sites. The antibody exhibits robust target enrichment compared to a non-specific IgG control and precisely reveals its structural organization around the binding site. Data generated by Prof. B. F. Pugh´s Lab at Cornell University.



miR-7 regulate the expression of YY1 and KLF4 by binding its 3`UTR region. (A) Analysis of miR-7 binding sites in the 3`UTR regions of KLF4 and YY1, through the miRtarbase database. (B) Raji cell line was previously co-transfected with an inhibitor (INH) or a mimic (MIM) of miR-7, and then transfected with the reporter plasmid with the luciferase gene containing the 3 ‘UTR region of YY1 (B) and KLF4 (C). The presence of INH for miR-7 increases the expression of KLF4 and YY1 (***p < 0.001) and the MIM inhibits its expression (**p < 0.001 *p < 0.05), respectively. (D) Left: Western blot for KLF4 and YY1 was done, after treatment with an inhibitor or miR-7 mimic compared to a control. Right: densitometric analysis of YY1 and KLF4 expression was done and significant differences were indicated (*p < 0.05). (E) Immunofluorescence in Raji cell lines was done and expression of KLF4 and YY1 were evaluated after transfection with an inhibitor or miR-7 mimic. Representative images of a triplicate of each experiment are shown. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/33194748), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Morales-Martinez M, Vega GG, Neri N et al. MicroRNA-7 Regulates Migration and Chemoresistance in Non-Hodgkin Lymphoma Cells Through Regulation of KLF4 and YY1 Frontiers in Oncology 2020-10-27 [PMID: 33194748]

Filidou E, Kandilogiannakis L, Tarapatzi G et al. A Simplified and Effective Approach for the Isolation of Small Pluripotent Stem Cells Derived from Human Peripheral Blood Biomedicines 2023-03-05 [PMID: 36979766] (Immunocytochemistry/ Immunofluorescence, Human)

Haiquan Lu, Yajing Lyu, Linh Tran, Jie Lan, Yangyiran Xie, Yongkang Yang, Naveena L Murugan, Yueyang J Wang, Gregg L Semenza HIF-1 recruits NANOG as a coactivator for TERT gene transcription in hypoxic breast cancer stem cells. Cell reports 2022-02-10 [PMID: 34592152]

Yang Y, Chen C, Zuo Q Et al. NARF is a hypoxia-induced coactivator for OCT4-mediated breast cancer stem cell specification Sci Adv 2022-12-09 [PMID: 36490339] (WB, Human)

Details:
Citation using the DyLight 405 version of this antibody.

Zhou Y, Yang J, Chen C et al. Polyphyllin III-Induced Ferroptosis in MDA-MB-231 Triple-Negative Breast Cancer Cells can Be Protected Against by KLF4-Mediated Upregulation of xCT Frontiers in pharmacology 2021-05-10 [PMID: 34040532] (IHC-P, IP, WB, Human)

Lu H, Xie Y, Tran L et al. Chemotherapy-induced S100A10 recruits KDM6A to facilitate OCT4-mediated breast cancer stemness J Clin Invest. 2020-05-19 [PMID: 32427586] (KD, WB, Human)

Lu H, Chen I, Shimoda LA et al. Chemotherapy-Induced Ca 2+ Release Stimulates Breast Cancer Stem Cell Enrichment Cell Rep. 2017-02-21 [PMID: 28228260] (WB, Human)

Details:
The positive impact of HIF inhibitors on breast cancer chemotherapy is explored through GSTO1 knockdown.

Zhang C, Zhi WI, Lu H et al. Hypoxia-inducible factors regulate pluripotency factor expression by ZNF217- and ALKBH5-mediated modulation of RNA methylation in breast cancer cells. Oncotarget. 2016-08-31 [PMID: 27590511] (WB, Human)

Nawandar DM, Wang A, Makielski K et al. Differentiation-Dependent KLF4 Expression Promotes Lytic Epstein-Barr Virus Infection in Epithelial Cells. PLoS Pathog 2015-10-01 [PMID: 26431332] (IF/IHC, Human)

Boxer LD, Barajas B, Tao S et al. ZNF750 interacts with KLF4 and RCOR1, KDM1A, and CTBP1/2 chromatin regulators to repress epidermal progenitor genes and induce differentiation genes. Genes Dev 2014-09-15 [PMID: 25228645] (Chemotaxis, ICC/IF, WB, IP, Human)

Hale AT, Tian H, Anih E et al. Endothelial Kruppel-like Factor 4 Regulates Angiogenesis and the Notch Signaling Pathway. J Biol Chem 2014-04-25 [PMID: 24599951] (IP, Human)

Elsir T, Edqvist PH, Carlson J et al. A study of embryonic stem cell-related proteins in human astrocytomas: identification of Nanog as a predictor of survival. Int J Cancer 2014-03-01 [PMID: 24037901]

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NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control

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