

Product Datasheet

FoxC1 Antibody NB100-1268

Unit Size: 0.1 mg

Store at -20C. Avoid freeze-thaw cycles.

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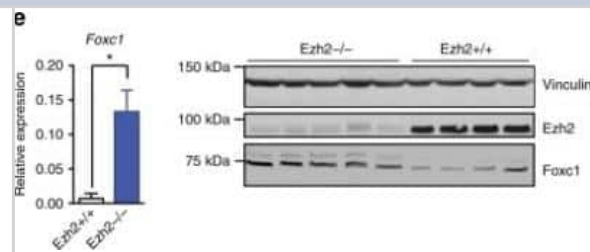
NB100-1268**FoxC1 Antibody**

| Product Information | |
|------------------------------------|--|
| Unit Size | 0.1 mg |
| Concentration | 0.5 mg/ml |
| Storage | Store at -20C. Avoid freeze-thaw cycles. |
| Clonality | Polyclonal |
| Preservative | 0.02% Sodium Azide |
| Isotype | IgG |
| Purity | Immunogen affinity purified |
| Buffer | Tris saline (20 mM Tris pH 7.3, 150 mM NaCl), 0.5% BSA |
| Product Description | |
| Description | Novus Biologicals Knockout (KO) Validated Goat FoxC1 Antibody (NB100-1268) is a polyclonal antibody validated for use in IHC, WB, ELISA, ICC/IF and ChIP. Anti-FoxC1 Antibody: Cited in 13 publications. All Novus Biologicals antibodies are covered by our 100% guarantee. |
| Host | Goat |
| Gene ID | 2296 |
| Gene Symbol | FOXC1 |
| Species | Human, Mouse, Zebrafish |
| Reactivity Notes | Zebrafish embryos reactivity is reported in scientific literature (PMID: 17000708). Mouse reactivity reported (PMID: 29959321) . Expected reactivity from sequence similarity: Rat. |
| Immunogen | FoxC1 Antibody is made to a peptide with sequence RTSGAFVYDCSKF corresponding to C-Terminus according to NP_001444.2. |
| Product Application Details | |
| Applications | Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Peptide ELISA, Chromatin Immunoprecipitation (ChIP), Knockdown Validated, Knockout Validated |
| Recommended Dilutions | Western Blot 0.5 - 1.5 ug/mL, Immunohistochemistry, Immunocytochemistry/Immunofluorescence 10 ug/mL, Immunohistochemistry-Paraffin, Immunohistochemistry-Frozen, Peptide ELISA Detection limit 1:32000, Chromatin Immunoprecipitation (ChIP) 1:10-1:500, Knockout Validated, Knockdown Validated |
| Application Notes | FoxC1 Antibody validated for ChIP from a verified customer review. A customer has reported positive results on human breast cancer cells (T47D). Use in IHC-P reactivity reported in (:29959321) . Use in IHC-Fr reported in scientific literature (PMID: 23862012). |

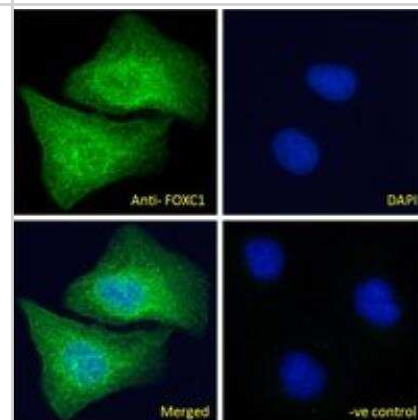


Images

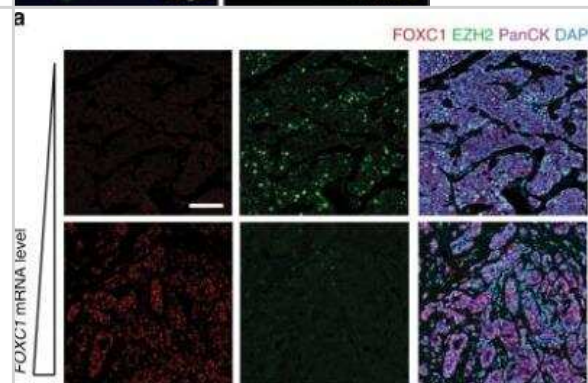
Western Blot: FoxC1 Antibody [NB100-1268] - Left- Significant upregulation of Foxc1 mRNA in Ezh2^{-/-} Tet-ON PyVmT endpoint tumours compared to wild-type tumours. Right- Immunoblot of Ezh2^{+/+} or Ezh2^{-/-} Tet-ON PyVmT endpoint tumours for Foxc1 and Ezh2 levels. Vinculin loading control. **p*<0.05, two tailed t-test. Image collected and cropped by CiteAb from the following publication ([nature.com/articles/s41467-018-04864-8](https://www.nature.com/articles/s41467-018-04864-8)), licensed under a CC-BY license.



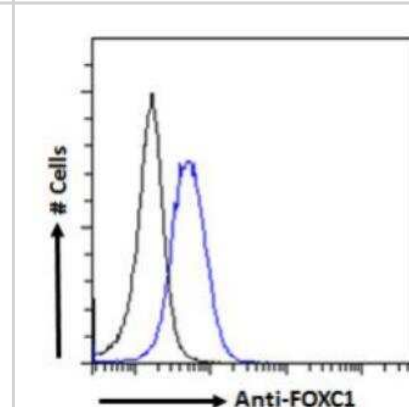
Immunocytochemistry/Immunofluorescence: FoxC1 Antibody [NB100-1268] - Paraformaldehyde fixed U2OS cells, permeabilized with 0.15% Triton. Primary antibody at 10 ug/mL, 1 hr incubation, followed by Alexa Fluor 488 secondary antibody at 2 ug/mL, showing nuclear and cytoplasmic staining. The nuclear stain is DAPI (blue). Negative control: Unimmunized goat IgG (10 ug/mL) followed by Alexa Fluor 488 secondary antibody (2 ug/mL).



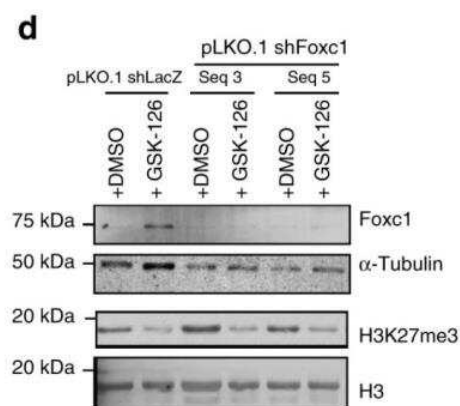
Immunohistochemistry: FoxC1 Antibody [NB100-1268] - Representative images of formalin fixed paraffin-embedded tissue samples from human Luminal B tumours stained for FOXC1 and EZH2. Scale bar is 100um. Image collected and cropped by CiteAb from the following publication ([nature.com/articles/s41467-018-04864-8](https://www.nature.com/articles/s41467-018-04864-8)), licensed under a CC-BY license.



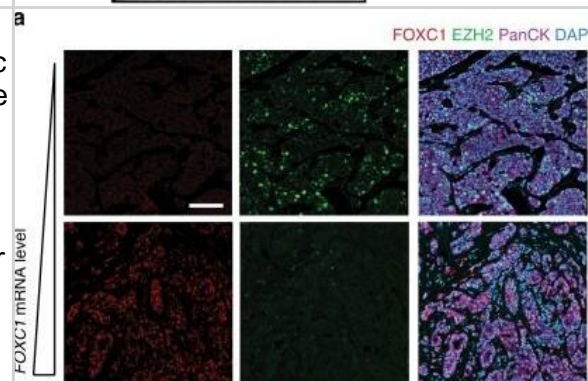
Flow Cytometry: FoxC1 Antibody [NB100-1268] - Paraformaldehyde fixed HEK293 cells (blue line), permeabilized with 0.5% Triton. Primary antibody at 10 ug/mL, 1 hr incubation, followed by Alexa Fluor 488 secondary antibody at 2 ug/mL. IgG control: Unimmunized goat IgG (black line) followed by Alexa Fluor 488 secondary antibody.



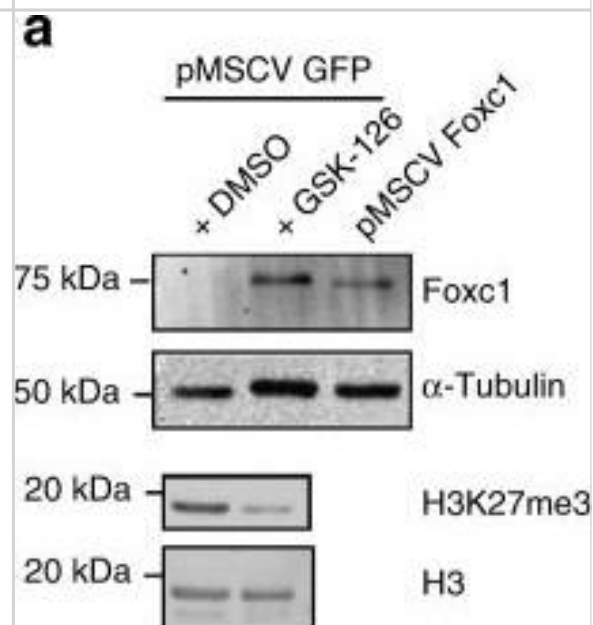
Western Blot: FoxC1 Antibody [NB100-1268] - Left: Representative immunoblot showing Foxc1 expression in cells stably transduced with a control shRNA (shLacZ) or two independent shRNAs targeting Foxc1 and treated with DMSO or GSK-126 (2 μ M for 72h). α -Tubulin was used as a loading control. Image collected and cropped by CiteAb from the following publication (nature.com/articles/s41467-018-04864-8), licensed under a CC-BY license.



Immunocytochemistry/ Immunofluorescence: FoxC1 Antibody [NB100-1268] - Breast Cancer subtype specificity of the EZH2/FOXC1 metastatic axis. **a** Representative images of formalin fixed paraffin-embedded tissue samples from human Luminal B tumours stained for FOXC1 & EZH2. Scale bar is 100 μ m. **b** Significant negative correlation between FOXC1 transcript levels & EZH2 protein levels (Total intensity) quantified by immunofluorescence in human Luminal B patient samples ($r = -0.52$, $p = 0.02$). Eight different fields taken with a $\times 20$ objective were quantified per sample. **c** Kaplan–Meier survival curve of relapse-free survival (RFS) of 1142 luminal B tumours with high or low FOXC1 (log rank $p = 0.001$). **d** Correlation between FOXC1 mRNA levels & the FOXC1 Signature in a cohort of 385 Luminal B patients from publicly available TCGA Breast Cancer data set. **e** Kaplan–Meier analysis of relapse-free survival of 1142 Luminal B tumours with high or low FOXC1 gene signature expression (log rank $p = 0.0044$). RFS relapse-free survival Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29959321>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Western Blot: FoxC1 Antibody [NB100-1268] - Ectopic expression of Foxc1 alters invasion but not proliferation. **a** Transwell invasion assay of PyVmT cells expressing exogenous Foxc1 or GFP. Experiments were performed three times, & results are displayed relative to untreated parental cell. * $p < 0.05$, Student's two tailed t-tests. **b** CyQUANT assay measuring cellular proliferation of PyVmT cells expressing exogenous GFP or Foxc1. R.F.U relative fluorescence units. Data were normalized to the fluorescence values at time = 0. **c** Enumeration of lung lesions following the injection of PyVmT cells expressing exogenous Foxc1 or GFP in the tail vein of athymic nude mice. * $p < 0.05$, Student's two tailed t-tests. Scale bar is 5 mm. **d** Left: Representative immunoblot showing Foxc1 expression in cells stably transduced with a control shRNA (shLacZ) or two independent shRNAs targeting Foxc1 & treated with DMSO or GSK-126 (2 μ M for 72 h). α -Tubulin was used as a loading control. Right: Transwell invasion assay of PyVmT cells infected with shRNA targeting LacZ (control) or two different sequences targeting Foxc1. Cells were pre-treated with DMSO or GSK-126 (2 μ M) for 72 h & assayed for their capacity to invade through Matrigel. All assays were performed in triplicate. * $p < 0.05$, Student's two tailed t-tests Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29959321>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Li, B;Xiong, W;Zuo, W;Shi, Y;Wang, T;Chang, L;Wu, Y;Ma, H;Bian, Q;Chang, ACY; Proximal telomeric decompaction due to telomere shortening drives FOXC1-dependent myocardial senescence *Nucleic acids research* 2024-04-18 [PMID: 38634789]

Lee YH, Lee HT, Chen CL et al. Role of FOXC1 in regulating APSCs self-renewal via STI-1/PrPC signaling. *Theranostics*. 2019-08-15 [PMID: 31588228] (ICC/IF, Chemotaxis, WB, KO, Mouse)

Lin Yu-Jung, Shyu Woei-Cherng, Chang Chi-Wei et al. Tumor Hypoxia Regulates Forkhead Box C1 to Promote Lung Cancer Progression. *Theranostics* 2018-03-05 [PMID: 28435458] (WB, IHC-Fr, Human)

Hirukawa A, Smith HW, Zuo D et al. Targeting EZH2 reactivates a breast cancer subtype-specific anti-metastatic transcriptional program. *Nat Commun*. 2018-06-29 [PMID: 29959321] (IHC-P, Mouse)

Wang X, Shan X, Gregory-Evans CY. A mouse model of aniridia reveals the in vivo downstream targets of Pax6 driving iris and ciliary body development in the eye. *Biochim. Biophys. Acta* 2016-10-20 [PMID: 27771509] (IHC-P)

Wang J, Xiao Y, Hsu CW et al. Yap and Taz play a crucial role in neural crest-derived craniofacial development. *Development*. 2016-02-01 [PMID: 26718006] (IHC-P, Mouse)

Zhou Y, Kato H, Asanoma K et al. Identification of FOXC1 as a TGF-beta1 responsive gene and its involvement in negative regulation of cell growth. *Genomics* 2002-11-01 [PMID: 12408963]

Siegenthaler JA, Choe Y, Patterson KP et al. Foxc1 is required by pericytes during fetal brain angiogenesis. *Biol Open* 2013-05-20 [PMID: 23862012] (IHC-Fr, Mouse)

Zarbalis, K et al. Cortical dysplasia skull defects in mice with a Foxc1 allele reveal the role of meningeal differentiation in regulating cortical development. *PNAS*, Aug; 104: 14002 - 14007. 2007-01-01 [PMID: 17715063]

Tamimi Y, Skarie JM, Footz T, Berry FB, Link BA, Walter MA. FGF19 is a target for FOXC1 regulation in ciliary body-derived cells. *um Mol Genet* 1;15(21):3229-40. 2006-11-01 [PMID: 17000708]

Berry FB, Lines MA, Oas JM, Footz T, Underhill DA, Gage PJ, Walter MA. Functional interactions between FOXC1 and PITX2 underlie the sensitivity to FOXC1 gene dose in Axenfeld-Rieger syndrome and anterior segment dysgenesis. *Hum Mol Genet*15;15(6):905-19. 2006-03-01 [PMID: 16449236]

Hayashi H, Kume T. Foxc transcription factors directly regulate Dll4 and Hey2 expression by interacting with the VEGF-Notch signaling pathways in endothelial cells. *PLoS One* 11;3(6):e2401. 2008-06-01 [PMID: 18545664]

More publications at <http://www.novusbio.com/NB100-1268>





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| | |
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| HAF109 | Donkey anti-Goat IgG Secondary Antibody [HRP (Horseradish Peroxidase)] |
| NB410-28088-1mg | Goat IgG Isotype Control |

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