

Product Datasheet

HNF-3 beta/FoxA2 Antibody (OTI3C10) NBP2-02088

Unit Size: 0.1 ml

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

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NBP2-02088**HNF-3 beta/FoxA2 Antibody (OTI3C10)**

Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at -20C. Avoid freeze-thaw cycles.
Clonality	Monoclonal
Clone	OTI3C10
Preservative	0.02% Sodium Azide
Isotype	IgG1
Purity	Immunogen affinity purified
Buffer	PBS (pH 7.3), 1.0% BSA and 50% Glycerol
Target Molecular Weight	48.1 kDa

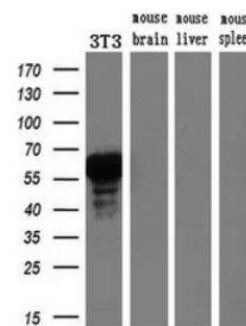
Product Description	
Description	Novus Biologicals Mouse HNF-3 beta/FoxA2 Antibody (OTI3C10) (NBP2-02088) is a monoclonal antibody validated for use in IHC, WB, Flow and ICC/IF. Anti-HNF-3 beta/FoxA2 Antibody: Cited in 3 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	3170
Gene Symbol	FOXA2
Species	Human, Mouse, Rat
Reactivity Notes	Please note that this antibody is reactive to Mouse and derived from the same host, Mouse. Mouse-On-Mouse blocking reagent may be needed for IHC and ICC experiments to reduce high background signal. You can find these reagents under catalog numbers PK-2200-NB and MP-2400-NB. Please contact Technical Support if you have any questions.
Immunogen	Recombinant protein expressed in E.coli corresponding to amino acids 300-458 of human FOXA2

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry
Recommended Dilutions	Western Blot 1:1000, Flow Cytometry 1:100, Immunohistochemistry 1:50, Immunocytochemistry/ Immunofluorescence 1:50-1:100, Immunohistochemistry-Paraffin 1:50

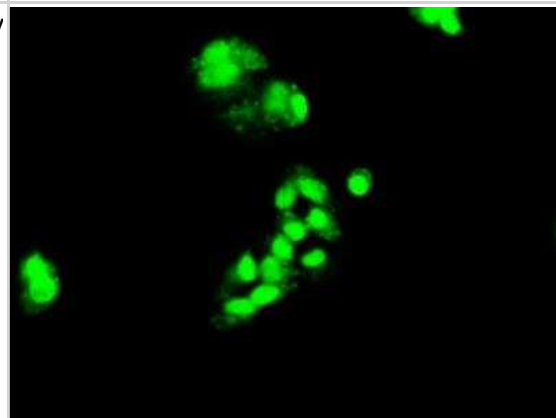


Images

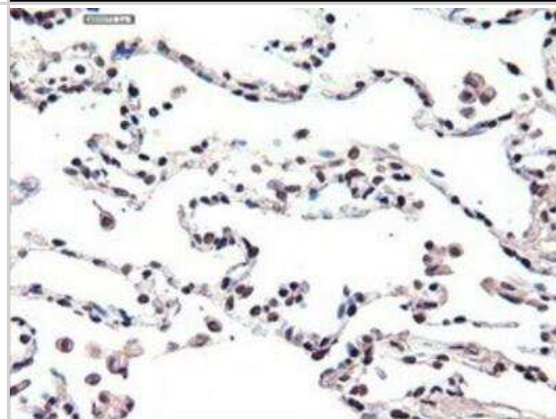
Western Blot: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - Analysis of extracts (10ug) from a mouse cell line and 3 different mouse tissues by using anti HNF-3 beta/FoxA2 monoclonal antibody.(1:200).



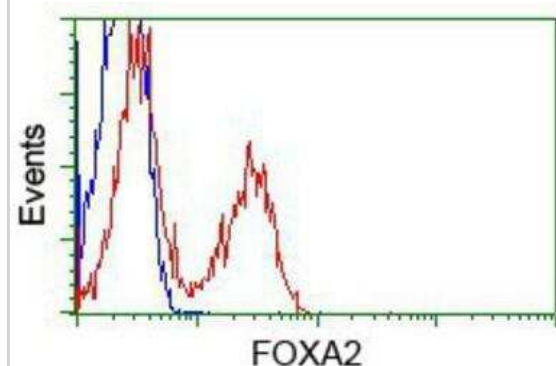
Immunocytochemistry/Immunofluorescence: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - Staining of HepG2 cells using anti HNF-3 beta/FoxA2 mouse monoclonal antibody at 1:50 dilution.



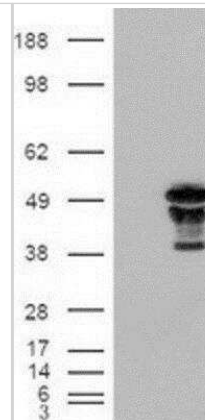
Immunohistochemistry-Paraffin: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - Staining of paraffin-embedded lung using anti-FOXA2 mouse monoclonal antibody.



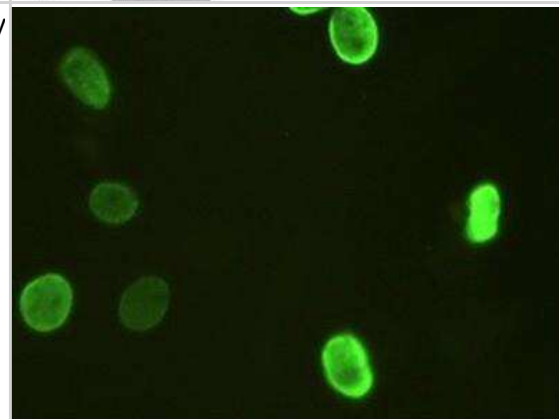
Flow Cytometry: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - HEK293T cells transfected with either pCMV6-ENTRY FOXA2.(Red) or empty vector control plasmid (Blue) were immunostained with anti-FOXA2 mouse monoclonal, and then analyzed by flow cytometry.



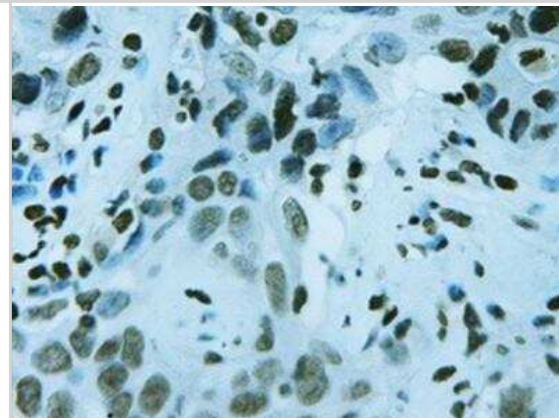
Western Blot: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - HEK293T cells were transfected with the pCMV6-ENTRY control (Left lane) or pCMV6-ENTRY FOXA2 (Right lane) cDNA for 48 hrs and lysed. Equivalent amounts of cell lysates (5 ug per lane) were separated by SDS-PAGE and immunoblotted with anti-FOXA2.



Immunocytochemistry/Immunofluorescence: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - Staining of HeLa cells transiently transfected by pCMV6-ENTRY FOXA2.

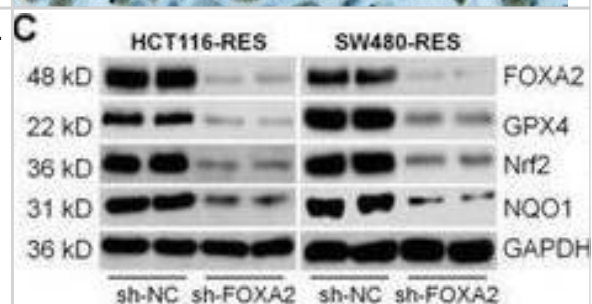


Immunohistochemistry-Paraffin: HNF-3 beta/FoxA2 Antibody (OTI3C10) [NBP2-02088] - Staining of paraffin-embedded Carcinoma of liver using anti-FOXA2 mouse monoclonal antibody.

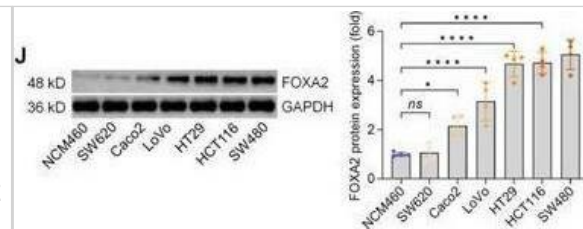


FOXA2 knockdown induces ferroptosis in chemoresistant CRC cell lines.

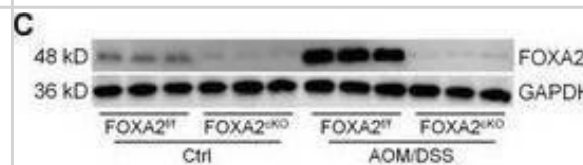
A) RT-qPCR analysis for Nrf2, NQO1, SOD1, GPX4 and SLC7A11 gene expression levels in drug-sensitive or -resistant HCT116 and SW480 cells (n = 3). B) Western blot assay for GPX4, Nrf2, and NQO1 protein expression levels in HCT116 and SW480 cells with or without chemoresistance (n = 4). C) Western blot assay for FOXA2, GPX4, Nrf2, and NQO1 protein expression levels in chemoresistant HCT116 and SW480 cells with or without FOXA2 knockdown (n = 4). (D) GPX4 expression by IF staining in drug-resistant CRC cells after transfection with sh-FOXA2 (n = 4). Scale bar = 20 um. E) ROS and (F) lipid ROS production by DCF-DA (Scale bar = 50 um) and C11-BODIPY581/591 (Scale bar = 20 um) staining, respectively, in chemoresistant HCT116 and SW480 cells with FOXA2 knockdown (n = 4). G) MDA levels, H) GSH contents, and I) iron currents in drug-resistant HCT116 and SW480 cells after FOXA2 knockdown (n = 4). Data are marked as the means +/- SD. *p < 0.05, **p < 0.01, ***p < 0.001, ****p < 0.0001. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37875418>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



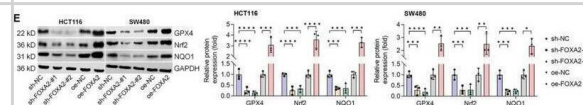
FOXA2 expression is upregulated in CRC patients. A,B) FOXA2 expression profile in CRC tissues from TCGA cohort. C) Representative IHC images for FOXA2 in CRC tissues and normal tissues (<https://www.proteinatlas.org/>). D) Kaplan-Meier analysis for relapse-free survival (RFS) of CRC patients with high (n = 709) or low (n = 633) FOXA2 expression based on the median expression of FOXA2 from the Kaplan-Meier Plotter (<https://kmplot.com/analysis/index.php?p=service>). E) Images of IHC staining for FOXA2 in CRC tissues and the paired adjacent normal tissues from our cohort. Scale bar = 120 μ m. F) IHC scores of FOXA2 expression levels in paired normal and CRC samples were quantified. G) RT-qPCR analysis for FOXA2 gene expression in human CRC tissues and the matched adjacent normal tissues (ANT) from our cohort (n = 60). H) FOXA2 protein expression in eighteen paired CRC tissues was examined using western blot. I) RT-qPCR (n = 5) and J) western blot (n = 4) assays for FOXA2 gene and protein expression levels in six CRC cell lines and non-tumor cell line NCM460. Data are marked as the means \pm SD. *p < 0.05, **p < 0.01, ****p < 0.0001. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37875418>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



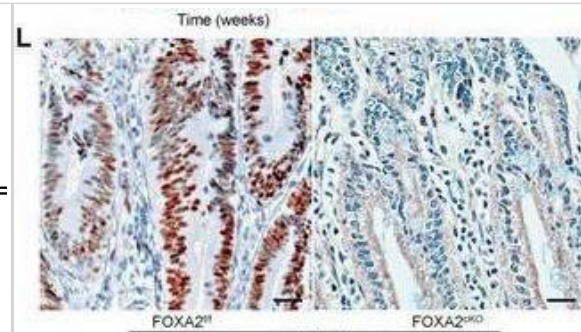
Conditional knockout of FOXA2 in IECs ameliorates colitis-associated tumorigenesis in vivo. A) Scheme protocols of recombination in Villin-Cre; FOXA2^{f/f} mice. B,C) RT-qPCR and western blot assays for FOXA2 gene and protein expression levels in colon crypts from the mice treated with or without AOM/DSS (n = 6). D) H&E and IHC staining of FOXA2 in colon from FOXA2^{f/f} and FOXA2^{CKO} mice (n = 8). Scale bar = 120 μ m. E) Inflammation scores were quantified. (F) FOXA2 expression by IHC staining was calculated. G) Body weights of mice were recorded (n = 10–15 in each group). H) Overall survival rates for each group of mice (n = 10–15 in each group). I) Images for colons from all groups of mice. J) Colon length was measured (n = 15). (K) Tumor number on colon was examined (n = 15). L) IHC staining for KI-67 in colon tissues was performed (n = 5). Scale bar = 50 μ m. Data are marked as the means \pm SD. *p < 0.05, **p < 0.01, ***p < 0.001, ****p < 0.0001; ns, no significant difference. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37875418>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



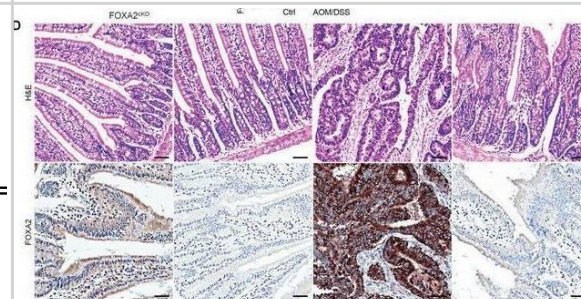
Positive correlation between FOXA2 and Nrf2/GPX4 signaling in CRC cell lines. A) Positive correlation between FOXA2 expression and GPX4, NFE2L2 (Nrf2), NQO1, G6PD, and SLC7A11 in CRC patients from TCGA database. B) RT-qPCR analysis for genes including Nrf2, GCLC, NQO1, SOD1, GPX4, SLC7A11 and G6PD in HCT116 and SW480 cells with FOXA2 knockdown or overexpression (n = 3). C,D) IF staining for GPX4 expression in CRC cell lines transfected with sh-FOXA2 or oe-FOXA2 (n = 4). Scale bar = 20 μ m. E) Western blot analysis for GPX4, Nrf2, and NQO1 protein expression levels in FOXA2-diminished or overexpressed HCT116 and SW480 cells (n = 3). Data are marked as the means \pm SD. *p < 0.05, **p < 0.01, ***p < 0.001, ****p < 0.0001. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/37875418>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



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Publications

Cao J, Yang Z. FOXA2 inhibits the TLR4/NF- κ B signaling pathway and alleviates inflammatory activation of macrophages in rheumatoid arthritis by repressing LY96 transcription. *Cytokine* 2024-10-31 [PMID: 39486110]

Liu X, Yan C, Chang C et al. FOXA2 Suppression by TRIM36 Exerts Anti-Tumor Role in Colorectal Cancer Via Inducing NRF2/GPX4-Regulated Ferroptosis *Advanced science* (Weinheim, Baden-Wurtemberg, Germany) 2023-10-24 [PMID: 37875418] (ICC/IF, Human)

Details:

1:1000 ICC/IF dilution

Rajderkar S, Mann JM, Panaretos C et al. Trim33 is required for appropriate development of pre-cardiogenic mesoderm *Dev. Biol.* 2019-03-30 [PMID: 30940539] (WB, Mouse)



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NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
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NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP1-97005-0.5mg	Mouse IgG1 Isotype Control (MG1)

Limitations

This product is for research use only and is not approved for use in humans or in clinical diagnosis. Primary Antibodies are guaranteed for 1 year from date of receipt.

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