

# Product Datasheet

## FOXO3 Antibody - BSA Free

### NB100-614

Unit Size: 100 ul

Store at 4C. Do not freeze.

[www.novusbio.com](http://www.novusbio.com)



[technical@novusbio.com](mailto:technical@novusbio.com)

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**NB100-614**

FOXO3 Antibody - BSA Free

| Product Information     |                                       |
|-------------------------|---------------------------------------|
| Unit Size               | 100 ul                                |
| Concentration           | 1.0 mg/ml                             |
| Storage                 | Store at 4C. Do not freeze.           |
| Clonality               | Polyclonal                            |
| Preservative            | 0.09% Sodium Azide                    |
| Isotype                 | IgG                                   |
| Purity                  | Immunogen affinity purified           |
| Buffer                  | Tris-Citrate/Phosphate (pH 7.0 - 8.0) |
| Target Molecular Weight | 71.3 kDa                              |

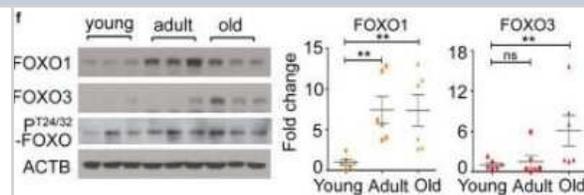
| Product Description     |  |
|-------------------------|--|
| Description             | Novus Biologicals Knockout (KO) Validated Rabbit FOXO3 Antibody - BSA Free (NB100-614) is a polyclonal antibody validated for use in IHC, WB, ICC/IF and IP. Anti-FOXO3 Antibody: Cited in 8 publications. All Novus Biologicals antibodies are covered by our 100% guarantee. |
| Host                    | Rabbit   |
| Gene ID                 | 2309   |
| Gene Symbol             | FOXO3  |
| Species                 | Human, Mouse, Porcine  |
| Reactivity Notes        | Porcine reactivity reported in scientific literature (PMID:33147486)   |
| Specificity/Sensitivity | NB100-614 is specific for human FOXO3a protein.  |
| Immunogen               | The immunogen recognized by this antibody maps to a region between residue 625 and the C-terminus (residue 673) of human Forkhead Box O3a using the numbering given in Swiss-Prot entry O43524 (GeneID 2309).  |

| Product Application Details |   |
|-----------------------------|---|
| Applications                | Western Blot, Immunohistochemistry-Paraffin, Immunocytochemistry/Immunofluorescence, Immunohistochemistry, Immunoprecipitation, Knockdown Validated, Knockout Validated   |
| Recommended Dilutions       | Western Blot 1:2000 - 1:10000, Immunohistochemistry, Immunocytochemistry/Immunofluorescence 1:250 - 1:1000, Immunoprecipitation 2-5 ug/mg lysate, Immunohistochemistry-Paraffin 1:500 - 1:2000, Knockout Validated, Knockdown Validated |
| Application Notes           | Epitope retrieval with Tris-EDTA pH 9.0 is recommended for FFPE tissue sections. FOXO3 antibody validated for ICC/IF, WB from verified customer reviews.  |

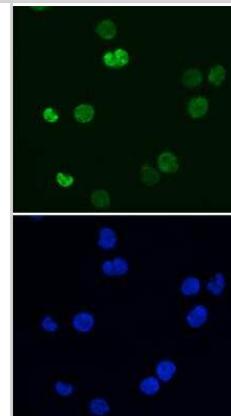


## Images

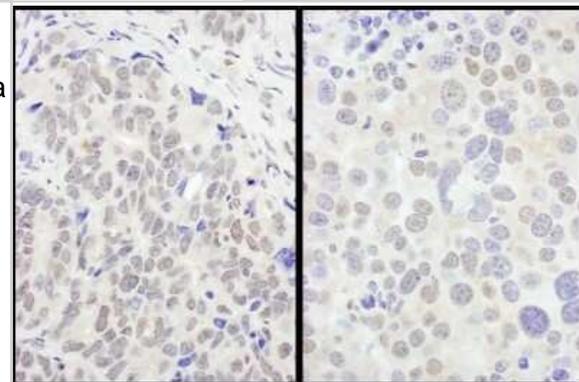
**Western Blot: FOXO3 Antibody [NB100-614] - Expression of FOXO increases in aging brain.** Protein expression of Foxo1, Foxo3, and phospho-T24/32 Foxo1/3 in young (<3-month, n = 6), adult (3-18-month, n = 6), and old (18-20-month, n = 6) FVB/B6 mixed-strain mouse cerebellums is shown. Each dot represents individual animal. Error bars, mean +/- SEM. \*p < .05; \*\*p < .01; \*\*\*p < .005. Statistical significance was determined by unpaired t-test. Image collected and cropped by CiteAb from the following publication (<https://doi.wiley.com/10.1111/ace.12701>), licensed under a CC-BY license.



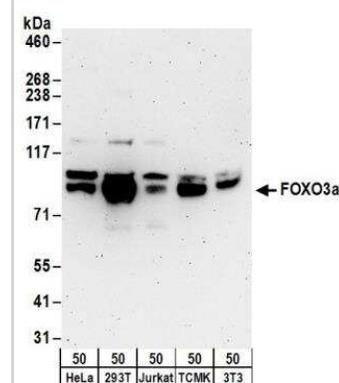
**Immunocytochemistry/Immunofluorescence: FOXO3 Antibody [NB100-614] - Analysis of FOXO3 in human B cell lymphoma using anti-FOXO3 antibody.** Image submitted by a verified customer review.



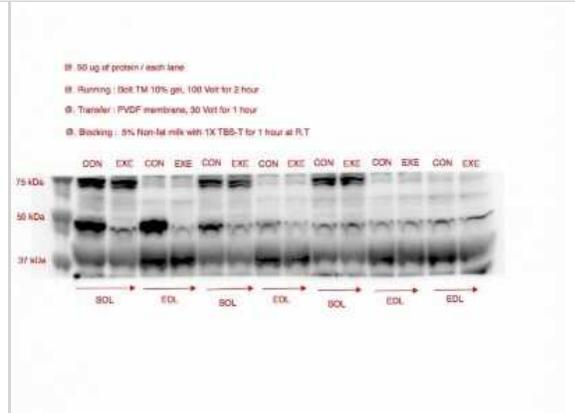
**Immunohistochemistry-Paraffin: FOXO3 Antibody [NB100-614] - Sample: FFPE section of human ovarian carcinoma (left) and mouse renal cell carcinoma (right).** Antibody: Affinity purified rabbit anti-FOXO3a used at a dilution of 1:1,000 (1ug/ml). Detection: DAB



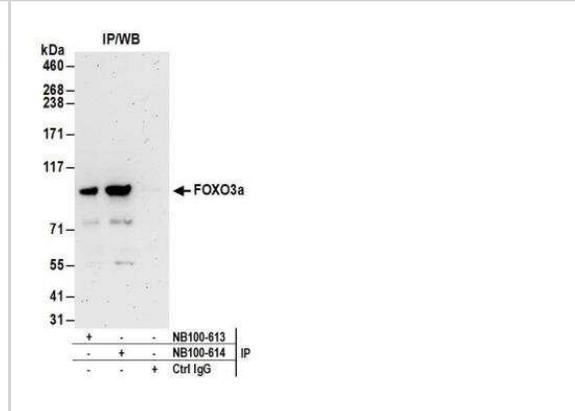
**Western Blot: FOXO3 Antibody [NB100-614] - Detection of Human and Mouse FOXO3a by Western Blot.** Samples: Whole cell lysate (50 ug) from HeLa, 293T, Jurkat, mouse TCMK-1, and mouse NIH3T3 cells. Antibodies: Affinity purified rabbit anti-FOXO3a antibody NB100-614 used for WB at 0.1 ug/ml. Detection: Chemiluminescence with an exposure time of 3 minutes.



Western Blot: FOXO3 Antibody [NB100-614] - FOXO3 Protein expression levels both control group and exercise group for skeletal muscles. Image submitted by a verified customer review \*{Mouse WB}\*



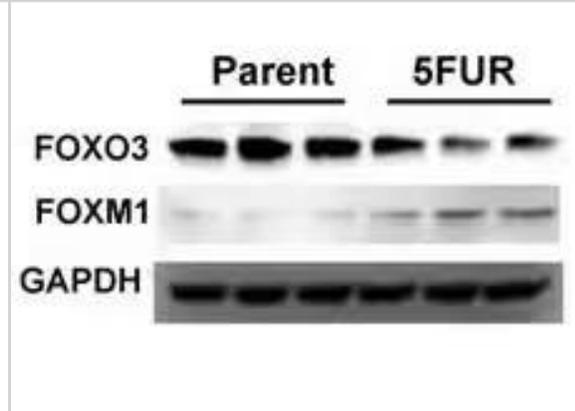
Immunoprecipitation: FOXO3 Antibody [NB100-614] - Detection of human FOXO3a by western blot of immunoprecipitates. Samples: Whole cell lysate (1 mg for IP; 20% of IP loaded) from MCF-7 cells. Antibodies: Affinity purified rabbit anti-FOXO3a antibody NB100-614 used for IP at 6 ug/mg lysate. FOXO3a was also immunoprecipitated by rabbit anti-FOXO3a antibody NB100-613. For blotting immunoprecipitated FOXO3a, NB100-614 was used at 1 ug/ml. Detection: Chemiluminescence with an exposure time of 3 minutes.



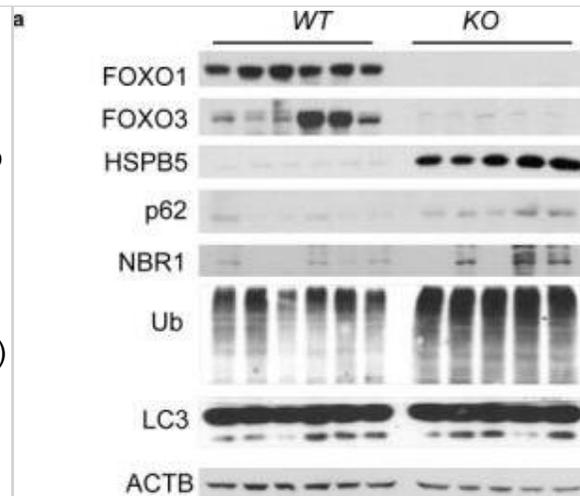
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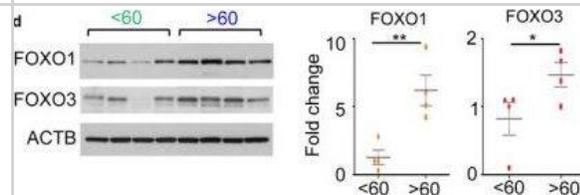
Western Blot: Rabbit Polyclonal FOXO3 Antibody [NB100-614] - Analysis of FOXO3 and FOXM1 in parental HCT-116 and HCT-116-FUR cells. Image from a verified customer review.



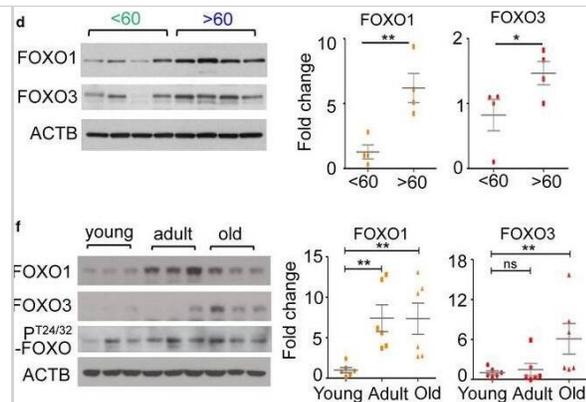
Western Blot: FOXO3 Antibody [NB100-614] - Increased proteotoxic stress & defective autophagy in Foxo1/3/4 knockout mice. (a) Tissue lysates from 12-month-old WT & KO brain cortex were analyzed by WB of indicated proteins. (c) p62 IF & (d) p62 & Ub IHC on cortical neurons from 12-month-old WT & KO brain cortex. Red arrows point to labeling positive inclusions. Scale bar = 200  $\mu$ m. (e) Quantitation of representative results for (d). (f) Indicated genotype of neural progenitor cultures was differentiated into neurons for 5 days. Some cultures were treated with rapamycin (100 ng/ml) for 24 hr on day 4 of differentiation. (h) The autophagy activity was analyzed by flow cytometry. The bar graph shows autophagy indices as % of control of (f). (i) Cultures as in (f) were treated with chloroquine (100 ng/ml) for 4 hr & analyzed for the expression levels of LC3 by WB. Representative result from three to five independent experiments is shown. (b, g, j) Quantitation of WB band densities. Only chloroquine-treated cultures were statistically compared in (j). Error bars, mean  $\pm$  SEM. \* $p < .05$ . \*\* $p < .01$ , \*\*\* $p < .005$ ; \*\*\*\* $p < .001$ . Statistical significance was determined by one-way ANOVA. Image collected & cropped by CiteAb from the following publication (<https://pubmed.ncbi.nlm.nih.gov/29178390>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



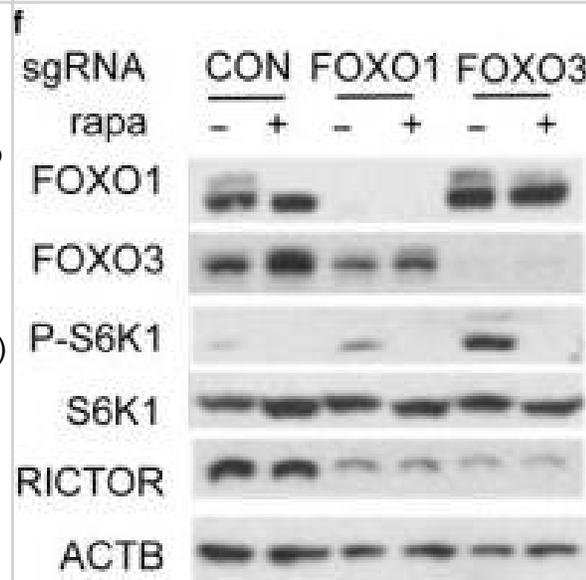
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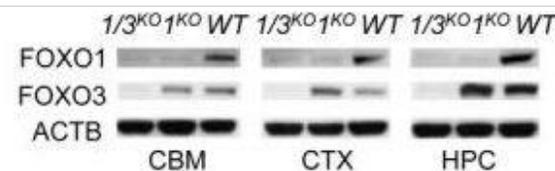


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## Publications

Gui T, Fleming C, Manzato C et al. Targeted perturbation of signaling-driven condensates Molecular cell 2023-11-16 [PMID: 37977121] (ICC/IF, Human)

Ghosh S, Singh R, Vanwinkle ZM et al. Microbial metabolite restricts 5-fluorouracil-resistant colonic tumor progression by sensitizing drug transporters via regulation of FOXO3-FOXO1 axis Theranostics 2022-07-18 [PMID: 35910798] (WB, Human)

Details:

Dilutions: 1:500

Hornsveld M, Feringa FM, Krenning L, et al. A FOXO-dependent replication checkpoint restricts proliferation of damaged cells Cell reports 2021-01-26 [PMID: 33503422] (WB, ICC/IF, Human)

Ludikhuize MC, Meerlo M, Gallego MP et al. Mitochondria Define Intestinal Stem Cell Differentiation Downstream of a FOXO/Notch Axis BMC Neurosci 2020-10-31 [PMID: 33147486] (WB, Porcine)

Oh H, Paik J. Genetic Ablation of FOXO in Mice to Investigate Its Physiological Role. Methods Mol. Biol. 1905-07-11 [PMID: 30414159] (Mouse)

Srivastava T, Diba P, Dean JM et al. A TLR/AKT/FoxO3 immune tolerance-like pathway disrupts the repair capacity of oligodendrocyte progenitors. J. Clin. Invest. 2018-04-16 [PMID: 29664021] (IF/IHC, Mouse)

Hwang I, Oh H, Santo E et al. FOXO protects against age-progressive axonal degeneration. Aging Cell 2017-11-26 [PMID: 29178390] (WB, Mouse)

Lin CW, Jan MS, Kuo JH. Exploring MicroRNA Expression Profiles Related to the mTOR Signaling Pathway in Mouse Embryonic Fibroblast Cells Treated with Polyethylenimine. Mol Pharm. [PMID: 26158199]



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Orders: nb-customerservice@bio-techne.com  
General: novus@novusbio.com

### **Products Related to NB100-614**

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|             |   |
|-------------|---|
| NBL1-10814  | FOXO3 Overexpression Lysate                         |
| NBP2-33376H | Blue Marker Antibody (6F4-F6) [HRP]                 |
| HAF008      | Goat anti-Rabbit IgG Secondary Antibody [HRP]       |
| NB7160      | Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP] |
| NBP2-24891  | Rabbit IgG Isotype Control                          |

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### **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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