Product Datasheet

DIO3 Antibody - BSA Free
NBP1-05767

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: 19

Protocols, Publications, Related Products, Reviews, Research Tools and Images at:
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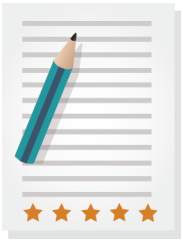
Updated 9/9/2025 v.20.1



NBP1-05767

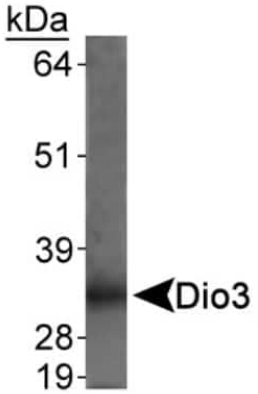
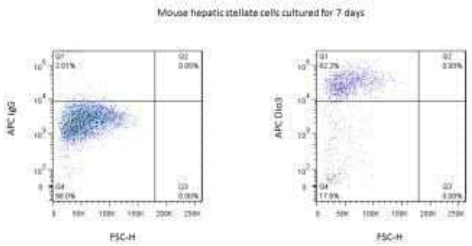
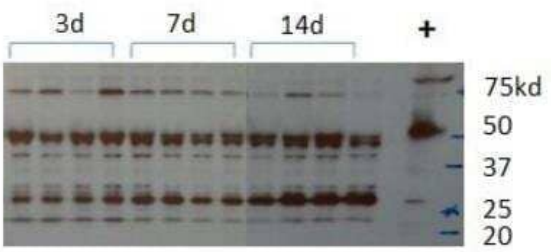
DIO3 Antibody - BSA Free

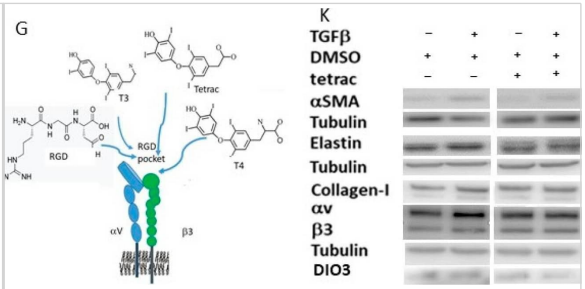
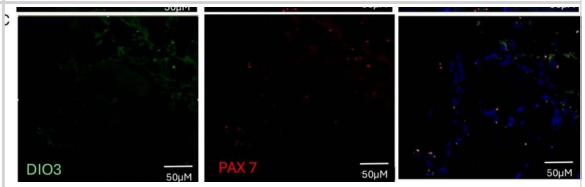
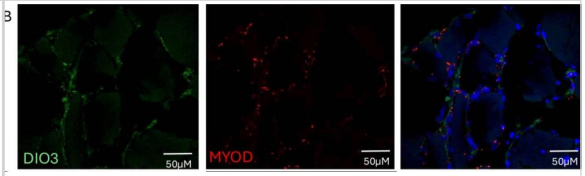
Product Information	
Unit Size	0.1 ml
Concentration	1 mg/ml
Storage	Store at 4C short term. Aliquot and store at -20C long term. Avoid freeze-thaw cycles.
Clonality	Polyclonal
Preservative	0.02% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	PBS
Target Molecular Weight	31 kDa

Product Description	
Description	Novus Biologicals Rabbit DIO3 Antibody - BSA Free (NBP1-05767) is a polyclonal antibody validated for use in IHC, WB, Flow and ICC/IF. Anti-DIO3 Antibody: Cited in 19 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Rabbit
Gene ID	1735
Gene Symbol	DIO3
Species	Human, Mouse, Rat, Hamster, Rabbit
Reactivity Notes	Rabbit reactivity via customer review.
Immunogen	Synthetic peptide made to an internal portion of rat DIO3 (within residues 250-300). [Swiss-Prot# P49897]

Product Application Details	
Applications	Western Blot, Immunohistochemistry-Paraffin, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen
Recommended Dilutions	Western Blot 0.5 ug/ml, Flow Cytometry reported by customer review using biotinylated antibody, Immunohistochemistry reported in scientific literature (PMID 24174657), Immunocytochemistry/ Immunofluorescence reported in scientific literature (PMID 24885572), Immunohistochemistry-Paraffin reported in scientific literature (PMID 25004090), Immunohistochemistry-Frozen reported in scientific literature (PMID 24885572)
Application Notes	In Western blot, a band is seen ~31 kDa. The observed molecular weight of the protein may vary from the listed predicted molecular weight due to post translational modifications, post translation cleavages, relative charges, and other experimental factors.

Images

Western Blot: DIO3 Antibody [NBP1-05767] - Detection of Dio3 in rat placenta.	
Flow Cytometry: DIO3 Antibody [NBP1-05767] - Analysis using the Biotin conjugate of NBP1-05767. Dio3 staining of mouse hepatic stellate cell cultured for 7 days. Image from verified customer review.	
Western Blot: DIO3 Antibody [NBP1-05767] - Detection of Dio3 in rabbit brain whole cell homogenate. Photo courtesy of product review by verified customer.	

The effect of fibrotic-ECM and tetrac on DF cell proliferation and death and on the levels of MF biomarkers, αvβ3, miRNA-2,1 and D3: DF (100,000 cells/well) were cultured on normal (−TGFβ (TGFb in the graphs)) or fibrotic-ECM (+TGFβ) with/without 0.5 μM tetrac or its solvent (DMSO-KOH propylene glycol) for 48 h. Then, cells were harvested, and the following was undertaken: (1) the cells were counted using a counter and trypan-blue; (2) the proteins were extracted from the cells, and protein levels were measured by Western blot; and (3) the RNA was extracted from the cells, and the level of miRNA-21 was evaluated using qPCR. (A,H) shows the average number of total cells, live cells, viability, and cyclin-D1 at the end of the experiment (mean + SD). (B–F,I,J) show collagen-I (B), elastin (C), αSMA (D), αv (E), β3 (F), miRNA-21 (I), and D3 (J) levels, in cells cultured on ECMs with/without tetrac. (G) shows a schematic demonstration of the αvβ3 binding site of RGD, T3, T4 and tetrac. (K) shows representative Western blot images of protein levels in the different treatments. The blots contain skipping lanes. * The results are significantly different ($p \leq 0.05$, $n = 4–6$). Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/37240272), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Type 3 deiodinase expression and colocalization on muscle. (A) DIO3 expression is augmented in the muscle of the critically ill, specifically in those with NTIS. (B) panel. RNAscope showing the colocalization of DIO3 and MYOD+, augmented in patients with T3 levels < 35 ng/dL. (C) RNAscope showing that DIO3 and PAX7+ do not colocalize in patients with T3 levels < 35 ng/dL. (D) RNAscope of DIO3 and DIO2, also shows that these genes do not colocalize in patients with T3 levels < 35 ng/dL. DAPI (blue), DIO3 (green), MYOD, PAX7, DIO2. (red) * p = 0.001, ** p < 0.0001. ns: Statistically not significant. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/40141055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	
Type 3 deiodinase expression and colocalization on muscle. (A) DIO3 expression is augmented in the muscle of the critically ill, specifically in those with NTIS. (B) panel. RNAscope showing the colocalization of DIO3 and MYOD+, augmented in patients with T3 levels < 35 ng/dL. (C) RNAscope showing that DIO3 and PAX7+ do not colocalize in patients with T3 levels < 35 ng/dL. (D) RNAscope of DIO3 and DIO2, also shows that these genes do not colocalize in patients with T3 levels < 35 ng/dL. DAPI (blue), DIO3 (green), MYOD, PAX7, DIO2. (red) * p = 0.001, ** p < 0.0001. ns: Statistically not significant. Image collected and cropped by CiteAb from the following open publication (https://pubmed.ncbi.nlm.nih.gov/40141055), licensed under a CC-BY license. Not internally tested by Novus Biologicals.	

Publications

Lavecchia AM, Mantzouratou P, Cerullo D et al. Thyroid hormone treatment counteracts cellular phenotypical remodeling in diabetic organs iScience 2023-10-20 [PMID: 37752946]

Nascimento BPP, Bocco BMLC, Fernandes GW et al. Induction of type 2 iodothyronine deiodinase after status epilepticus modifies hippocampal gene expression in male mice Endocrinology 2018-06-13 [PMID: 29905787]

Peluso T, Nittoli V, Reale C et al. Chronic Exposure to Chlorpyrifos Damages Thyroid Activity and Imbalances Hepatic Thyroid Hormones Signaling and Glucose Metabolism: Dependency of T3-FOXO1 Axis by Hyperglycemia International journal of molecular sciences 2023-05-31 [PMID: 37298533] (WB, Mouse)

Details:
Dilution: 1:3000

Salas-Lucia F, Fekete C, Sinkó R et al. Axonal T3 uptake and transport can trigger thyroid hormone signaling in the brain eLife 2023-05-19 [PMID: 37204837] (ICC/IF, IHC, Mouse, Rat)

Kohon MY, Zaaroor Levy M, Hornik-Lurie T et al. ?v?3 Integrin as a Link between the Development of Fibrosis and Thyroid Hormones in Systemic Sclerosis International journal of molecular sciences 2023-05-18 [PMID: 37240272] (WB, Human)

Agarwal S, Koh KH, Tardi NJ Et al. Deiodinase-3 is a thyrostat to regulate podocyte homeostasis EBioMedicine 2021-10-01 [PMID: 34649077] (WB, ICC/IF, PLA, Mouse, Human)

Devalraju Kp, Tripathi D, Neela Vsk Et Al. Reduced thyroxine production in young household contacts of tuberculosis patients increases active tuberculosis disease risk JCI insight 2021-07-08 [PMID: 34236051] (WB)

Benedetti V, Lavecchia AM, Locatelli M et al. Alteration of thyroid hormone signaling triggers the diabetes-induced pathological growth, remodeling, and dedifferentiation of podocytes JCI Insight 2019-09-19 [PMID: 31534055] (IHC-P, Rat)

Porings AS, Lowin T, Dufner B et al. A thyroid hormone network exists in synovial fibroblasts of rheumatoid arthritis and osteoarthritis patients Sci Rep [PMID: 31519956] (IHC-Fr, Human)

Calonne J, Isacco L, Miles-Chan J et al. Reduced Skeletal Muscle Protein Turnover and Thyroid Hormone Metabolism in Adaptive Thermogenesis That Facilitates Body Fat Recovery During Weight Regain Front Endocrinol (Lausanne) 2019-02-28 [PMID: 30873123] (WB, Rat)

Yamauchi I, Sakane Y, Yamashita T et al. Effects of growth hormone on thyroid function are mediated by type 2 iodothyronine deiodinase in humans. Endocrine 2017-12-22 [PMID: 29274063] (WB, Human)

De Andrade PB, Neff LA, Strosova MK et al. Caloric restriction induces energy-sparing alterations in skeletal muscle contraction, fiber composition and local thyroid hormone metabolism that persist during catch-up fat upon refeeding. Front Physiol 2015-01-01 [PMID: 26441673]

More publications at http://www.novusbio.com/NBP1-05767

Procedures

Immunohistochemistry-Paraffin Protocol for DIO3 Antibody (NBP1-05767)
Immunohistochemistry-Paraffin Embedded Sections

Antigen Unmasking:
Bring slides to a boil in 10 mM sodium citrate buffer (pH 6.0) then maintain at a sub-boiling temperature for 10 minutes. Cool slides on bench-top for 30 minutes (keep slides in the sodium citrate buffer at all times).

Staining:
1. Wash sections in deionized water three times for 5 minutes each.
2. Wash sections in PBS for 5 minutes.
3. Block each section with 100-400 ul blocking solution (1% BSA in PBS) for 1 hour at room temperature.
4. Remove blocking solution and add 100-400 ul diluted primary antibody. Incubate overnight at 4 C.
5. Remove antibody solution and wash sections in wash buffer three times for 5 minutes each.
6. Add 100-400 ul HRP polymer conjugated secondary antibody. Incubate 30 minutes at room temperature.
7. Wash sections three times in wash buffer for 5 minutes each.
8. Add 100-400 ul DAB substrate to each section and monitor staining closely.
9. As soon as the sections develop, immerse slides in deionized water.
10. Counterstain sections in hematoxylin.
11. Wash sections in deionized water two times for 5 minutes each.
12. Dehydrate sections.
13. Mount coverslips.

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Products Related to NBP1-05767

NBP1-05767PEP	DIO3 Antibody Blocking Peptide
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

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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