

Product Datasheet

ER beta/NR3A2 Antibody (14C8) - Azide and BSA Free NB200-305

Unit Size: 100 ul

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

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NB200-305

ER beta/NR3A2 Antibody (14C8) - Azide and BSA Free

Product Information	
Unit Size	100 ul
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	Monoclonal
Clone	14C8
Preservative	No Preservative
Isotype	IgG2b
Purity	Protein G purified
Buffer	PBS
Target Molecular Weight	59 kDa

Product Description	
Description	Novus Biologicals Mouse ER beta/NR3A2 Antibody (14C8) - Azide and BSA Free (NB200-305) is a monoclonal antibody validated for use in IHC, WB, Flow, ICC/IF, Simple Western, IP and ChIP. Anti-ER beta/NR3A2 Antibody: Cited in 78 publications. All Novus Biologicals antibodies are covered by our 100% guarantee.
Host	Mouse
Gene ID	2100
Gene Symbol	ESR2
Species	Human, Mouse, Monkey
Reactivity Notes	Rabbit reactivity reported in (PMID: 23664379). Mouse reactivity reported in scientific literature (PMID: 15750629). 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.
Specificity/Sensitivity	Strong Erb staining in epithelial cell nuclei. Occasional weak to moderate staining is seen in surrounding stromal and endothelial cell nuclei. Sporadic light cytoplasmic staining is sometimes observed. We have also successfully detected ERb in colon and ovarian tumors using the same antibody.
Immunogen	Amino acids 1-153 of human ER-beta expressed in E. coli.

Product Application Details	
Applications	Western Blot, Simple Western, Immunohistochemistry-Paraffin, Dot Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunoprecipitation, Chromatin Immunoprecipitation (ChIP)
Recommended Dilutions	Western Blot 1-5 ug/ml, Simple Western 1:25, Flow Cytometry 1:10 - 1:1000, Immunohistochemistry 1:10 - 1:500, Immunocytochemistry/ Immunofluorescence 1:10 - 1:500, Immunoprecipitation, Immunohistochemistry-Paraffin 1:10 - 1:500, Immunohistochemistry-Frozen, Dot Blot, Chromatin Immunoprecipitation (ChIP)

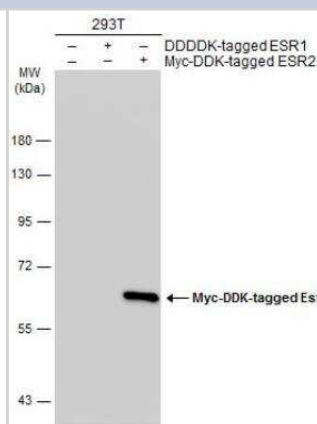


Application Notes

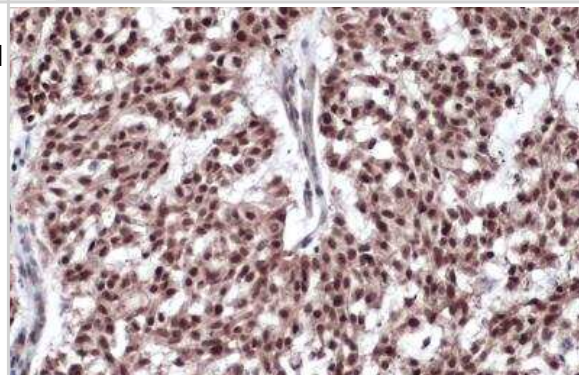
Strong ER beta staining in epithelial cell nuclei. Occasional weak to moderate staining is seen in surrounding stromal and endothelial cell nuclei. Sporadic light cytoplasmic staining is sometimes observed. We have also detected ER beta in colon and ovarian tumors. Chip, IP reactivity reported in (PMID: 22820289). See [Simple Western Antibody Database](#) for Simple Western validation: Tested in Blood, separated by Size, antibody dilution of 1:25

Images

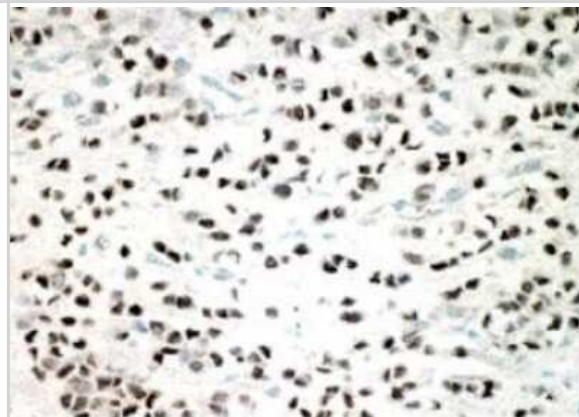
Western Blot: ER beta/NR3A2 Antibody (14C8) [NB200-305] - Non-transfected (-) and transfected (+) 293T whole cell extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with Estrogen Receptor beta antibody [14C8] diluted at 1:5000. The HRP-conjugated anti-mouse IgG antibody (NBP2-19382) was used to detect the primary antibody



Immunohistochemistry-Paraffin: ER beta/NR3A2 Antibody (14C8) [NB200-305] - Human breast carcinoma. Estrogen Receptor beta stained by Estrogen Receptor beta antibody [14C8] diluted at 1:200. Antigen Retrieval: Citrate buffer, pH 6.0, 15 min

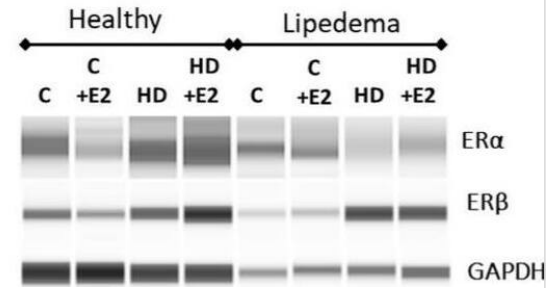


Immunohistochemistry-Paraffin: Estrogen Receptor beta Antibody (14C8) [NB200-305] - Infiltrating lobular carcinoma of the breast.

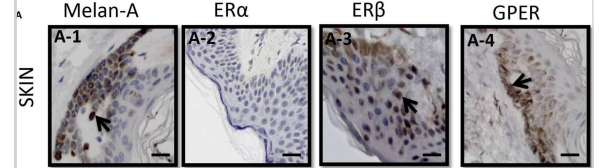


Expression of estrogen receptors in ASCs. (A). qRT-PCR shows a significant increase in ER gene expression in HD-treated healthy and lipedema ASCs ($n = 3$). (B). Quantification of Western Blot gels shows increased ER protein expression in HD-treated healthy and lipedema ASCs ($n = 3$). (C). Capillary Western blot (Jess) assay showing ER α , ER β , and GAPDH protein expression in an assembled gel-like image view. Values are means \pm SEM. * $p < 0.05$; ** $p < 0.01$. Image collected and cropped by CiteAb from the following open publication (<https://www.mdpi.com/2227-9059/12/5/1042>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

C



ERs expressions and the survival rates in melanoma patients. (A) Immunohistochemical staining of Melanin (A-1), ER α (A-2), ER β (A-3), and GPER (A-4) in skin (upper panel) (A-1–A-4) and (B) melanoma (lower panel) (B-1–B-4), where normal human skin serves as control. Arrows indicates the positive signals. Kaplan–Meier survival curves of the expression of ER α (C,F), ER β (D,G), and GPER(E,H) in all patients from the Human Protein Atlas (C–E) and TCGA (F–H). Scale bar is 100 μ m. Image collected and cropped by CiteAb from the following open publication (<https://pubmed.ncbi.nlm.nih.gov/31696058>), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Publications

Sun Y, Wang H, Wang W et al. Glutamatergic and GABAergic neurons in the preoptic area of the hypothalamus play key roles in menopausal hot flashes *Frontiers in Aging Neuroscience* 2022-10-14 [PMID: 36313017]

Zhang X, Zhao P, Ma M et al. Missing link between tissue specific expressing pattern of ER α and the clinical manifestations in LGBLEL *Frontiers in Medicine* 2023-06-29 [PMID: 37457559]

Xue Wen, Yang Xiao, Haitao Xiao, Xueqin Tan, Beiyi Wu, Zehua Li, Ru Wang, Xuwen Xu, Tao Li Bisphenol S induces brown adipose tissue whitening and aggravates diet-induced obesity in an estrogen-dependent manner. *Cell reports* 2024-01-01 [PMID: 38041811]

Dubey, N, Hoffman, J F Et al. The ESC/E(Z) complex, an effector of response to ovarian steroids, manifests an intrinsic difference in cells from women with premenstrual dysphoric disorder. *Mol Psychiatry* 2017-08-01 [PMID: 28044059] (WB, Human)

Liu M, Li H, Wang L et al. Cyanidin-3-o-glucoside pharmacologically inhibits tumorigenesis via estrogen receptor beta in melanoma mice *Front Oncol* 2019-10-22 [PMID: 31696058] (Human)

Monteiro AC, Muenzner JK, Andrade F et al. Gene expression in oligodendrocytes during remyelination reveals cholesterol homeostasis as a therapeutic target in multiple sclerosis *Proc. Natl. Acad. Sci. U.S.A.* 2019-05-14 [PMID: 31040210] (Chemotaxis, Mouse)

Castelan F, Xelhuantzi N, Hernandez-Aragon LG et al. Morphometry of paravaginal ganglia from the pelvic plexus: impact of multiparity, primiparity, and pregnancy. *Eur J Obstet Gynecol Reprod Biol* 2013-08-06 [PMID: 23932302] (IHC-P, Rabbit)

Kauffman EC, Robinson BD, Downes M et al. Estrogen receptor-beta expression and pharmacological targeting in bladder cancer. *Oncol Rep* 2013-07-01 [PMID: 23612777]

Jardel P, Debiais C, Godet J, Irani J, Fromont G. Ductal Carcinoma Of The Prostate Shows A Different Immunophenotype From High Grade Acinar Cancer. *Histopathology* 2013-03-11 [PMID: 23701402] (IHC-P, Human)

Lopez-Garcia K, E Cuevas, Corona-Quintanilla DL et al. Effect of multiparity on morphometry and oestrogen receptor expression of pelvic and perineal striated muscles in rabbits: is serum oestradiol relevant?. *Eur J Obstet Gynecol Reprod Bio* 2013-05-07 [PMID: 23664379] (IHC-P, Rabbit)

Verma Primate, Miki Y, Abe K et al. Co-expression of estrogen receptor beta and aromatase in Japanese lung cancer patients: gender-dependent clinical outcome. *Life Sci* 2012-10-01 [PMID: 22982181] (Chemotaxis, Human)

Sase T, Suzuki T, Miura K et al. Runt-related transcription factor 2 (RUNX2) in human colon carcinoma: A potent prognostic factor associated with estrogen receptor. *Int J Cancer*. 2012-03-07 [PMID: 22396198] (Chemotaxis, Human)

More publications at <http://www.novusbio.com/NB200-305>

Procedures

Immunohistochemistry protocol specific for Estrogen Receptor beta Antibody (NB200-305)

Immunohistochemistry Procedure

1. Cut 4-5 micron sections and mount onto Superfrost plus slides.
2. Dewax in xylene and rehydrate through graded alcohols.
3. Block with 3% H₂O₂ in methanol for 10 minutes.
4. Wash in running tap water for 5 minutes then block non-specific binding sites with normal horse serum.
5. To unmask the antigen, heat-mediated retrieval is required using either a microwave or pressure cooker. For microwave-mediated retrieval immerse sections in 1 mM citrate buffer, pH 6, and microwaved at full power (600W) for 27 minutes (NB The exact time will depend on both the power and age of the microwave). Alternatively, sections can be pressure cooked for 4 minutes, immersed in 1 mM citrate buffer, pH 6. Allow sections to cool for 20-30 minutes and wash in running tap water for 5 minutes.
6. Incubation sections with 5ug/ml primary antibody at 4C overnight. Incubation time and temperature are critical.
7. Incubate with appropriate biotinylated secondary antibody for 30 minutes at room temperature, followed by streptavidin ABC kit (DAKO) according to the manufacturer's instructions.
8. Prepare 3,3'-diaminobenzidine substrate and apply for 5-10 minutes.
9. Counterstain with haematoxylin, dehydrate and coverslip.

Using this protocol, we detect consistent, strong ER β staining in epithelial cell nuclei. Occasional weak to moderate staining is seen in surrounding stromal and endothelial cell nuclei. Sporadic light cytoplasmic staining is sometimes observed. We have also successfully detected ER β in colon and ovarian tumours using the same antibody.





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Products Related to NB200-305

NBP2-33376H	Blue Marker Antibody (6F4-F6) [HRP]
HAF007	Goat anti-Mouse IgG Secondary Antibody [HRP]
NB7539	Goat anti-Mouse IgG (H+L) Secondary Antibody [HRP]
NBP2-27231	Mouse IgG2b Isotype Control (MPC-11)

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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