# **Product Datasheet**

# beta-Catenin Antibody NBP1-32239

Unit Size: 100 ul

Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.

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#### NBP1-32239

beta-Catenin Antibody

Product Information		
Unit Size	100 ul	
Concentration	Concentrations vary lot to lot. See vial label for concentration. If unlisted please contact technical services.	
Storage	Aliquot and store at -20C or -80C. Avoid freeze-thaw cycles.	
Clonality	Polyclonal	
Preservative	0.025% Proclin 300	
Isotype	IgG	
Purity	Antigen Affinity-purified	
Buffer	PBS, 1% BSA, 20% Glycerol	
Target Molecular Weight	85 kDa	
Product Description		
Host	Rabbit	
Gene ID	1499	
Gene Symbol	CTNNB1	
Species	Human, Mouse, Rat, Canine, Feline, Rabbit, Zebrafish	
Reactivity Notes	Xenopus laevis (97%), Cat (100%).	
Marker	Epithelial Cell Marker, Adherens Junction Marker	
Immunogen	Recombinant protein encompassing a sequence within the N-terminus region of human beta-Catenin. The exact sequence is proprietary.	
Product Application Details		
Applications	Western Blot, Flow Cytometry, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Frozen, Immunohistochemistry- Paraffin, Immunoprecipitation, Proximity Ligation Assay, Chromatin Immunoprecipitation (ChIP), Immunohistochemistry Whole-Mount	
Recommended Dilutions	Western Blot 1:500-1:20000, Flow Cytometry 1:50-1:200, Immunohistochemistry 1:100-1:1000, Immunocytochemistry/ Immunofluorescence 1:100-1:1000, Immunoprecipitation 1:50-1:100, Immunohistochemistry-Paraffin 1:100-1:1000, Immunohistochemistry-Frozen Assay dependent, Proximity Ligation Assay Reported in scientific literature (PMID 28589954), Immunohistochemistry Whole- Mount Assay dependent, Chromatin Immunoprecipitation (ChIP) Assay dependent	

#### Images

Western Blot: beta-Catenin Antibody [NBP1-32239] - Various whole cell extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with beta Catenin antibody [N1N2-2], N-term diluted at 1:3000.





Immunocytochemistry/Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - Paraformaldehyde-fixed A431, using beta- Catenin antibody (Green) at 1:200 dilution. Alpha-tubulin filaments were labeled with an alpha Tubulin antibody (Red) at 1:2000. Kri5-ri lA letQ-Cie Krl5-rl IA lolQ-Cro Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Control Control Whit toat Chohi WNT10A/beta-catenin signaling is required for region-specific differentiation. Epithelial deletion of beta-catenin (g-h",k,l) induced from P25, P110 or P15 as indicated causes decreased expression of nuclear beta-catenin, LEF1 and HOXC13 (white arrows, LEF1+ proliferating cells; yellow arrows, HOXC13+ differentiating cells). Image collected and cropped by CiteAb from the following publication (https://www.nature.com/doifinder/10.1038/ncomms15397), licensed under a CC-BY license. Flow Cytometry: beta-Catenin Antibody [NBP1-32239] - HeLa cell.Black: Unlabelled sample was used as a control. Red: beta Catenin antibody 2,000 [N1N2-2], N-term dilution: 1:50.Acquisition of 20,000 events were collected using a Dylight 488-conjugated secondary antibody for FACS 1,500 analysis. 000,1 Count 200 105 FL1-A Chromatin Immunoprecipitation (ChIP): beta-Catenin Antibody [NBP1-32239] - Cross-linked ChIP was performed with HCT116 chromatin extract and 5 ug of either control rabbit IgG or anti-beta Catenin 8.0 7.51 antibody. The precipitated DNA was detected by PCR with primer set 7.0 targeting to c-Myc promoter. 6.0 5.0 enrichmen 4.0 c-Myc promoter 3.0 plo 2.0 1.00 1.0 0.0

rabbit IgG CTNNB



Western Blot: beta-Catenin Antibody [NBP1-32239] - Western blot for beta-catenin in HEK 293 cells treated with LiCI (10mM) for 1 hr. Image from verified customer review.	LiCL (10mM) 0 min 60 min 98KDa- 62KDa-
Western Blot: beta-Catenin Antibody [NBP1-32239] - Sample (50 ug of	KDa
whole cell lysate) A: mouse brain 7.5% SDS PAGE diluted at 1:1000	170 — A 130 — _
	95 <b>—</b> 72 <b>—</b>
	55 <b>—</b>
Western Blot: beta-Catenin Antibody [NBP1-32239] - A. 30 ug PC-12 whole cell lysate/extract 7.5 % SDS-PAGE beta Catenin antibody [N1N2- 2], N-term dilution: 1:1000	KDa 170 — A 130 — 95 — ← 72 — 55 — 43 —
Western Blot: beta-Catenin Antibody [NBP1-32239] - Non-transfected (-) and transfected (+) HeLa whole cell extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with beta Catenin antibody [N1N2-2], N-term.	HeLa - + + CTNNB1 shRNA (KDa) 180 - 130 - 95 - 55 - 55 - 55 - 55 - 180 - 18



Immunocytochemistry/Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - HeLa cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: beta Catenin protein stained by beta Catenin antibody [N1N2-2], N-term diluted at 1:500. Blue: Hoechst 33342 staining.



Immunocytochemistry/Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - HCT 116 cells were fixed in 4% paraformaldehyde at RT for 15 min. Green: beta Catenin protein stained by beta Catenin antibody [N1N2-2], N-term diluted at 1:500. Blue: Hoechst 33342 staining.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded mouse colon. Green: beta Catenin antibody [diluted at 1:500. Red: alpha Tubulin antibody diluted at 1:500. Blue: Hoechst 33342 staining.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] - Paraffin-embedded mouse urinary bladder diluted at 1:500.









Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] - Paraffin-embedded mouse skin dilution: 1:500. Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded mouse colon dilution: 1:500. Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded mouse duodenum. beta Catenin antibody [N1N2-2], N-term diluted at 1:500. Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded human esophagus. beta Catenin antibody [N1N2-2], N-term diluted at 1:500.





Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded human cervix. beta Catenin antibody [N1N2-2], Nterm diluted at 1:500.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] -Paraffin-embedded mouse duodenum. beta Catenin antibody [N1N2-2], N-term diluted at 1:500.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] - Paraffin-embedded rat colon. beta Catenin antibody [N1N2-2], N-term diluted at 1:500.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] - Paraffin-embedded rat duodenum. beta Catenin antibody [N1N2-2], N-term diluted at 1:500.





ZO-1/

β-catenin/

F-actin B

Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - P-cadherin is co-localized with other junctional proteins at the RPE cell border in mice.Immunofluorescence of mouse RPE flatmounts. Double staining: P-cadherin (red; A, E, I) & either ZO-1 (green; B),  $\beta$ -catenin (green; F), or F-actin (green; J), with nuclear stain by DAPI (blue; C, G, K). Merged images (D, H, L) show the co-localization of Pcadherin with ZO-1 (tight junction),  $\beta$ -catenin (adherens junction), & Factin (adherens junction) at the cell-cell border. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29338041), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - WNT10A/B-catenin signalling is required for regionspecific differentiation.(a-d) Filiform papillae are present in Wnt10a-/- & inducible  $\beta$ -catenin mutant dorsal tongue (yellow arrows), but horny structures & expression of hard keratins (in situ hybridization, purple signals) are decreased (red arrows). (e-I) Epithelial deletion of Wnt10a (e-f",i,j) or β-catenin (g-h",k,l) induced from P25, P110 or P15 as indicated causes decreased expression of nuclear β-catenin, LEF1 & HOXC13 (white arrows, LEF1+ proliferating cells; yellow arrows, HOXC13+ differentiating cells). (m) qPCR shows significantly decreased Hoxc13 levels in Wnt10a & β-catenin mutant tongue epithelium. (n-r) IF & qPCR reveal reduced levels of KRT9 protein (n-q) & mRNA (r) in Wnt10a-/- & inducible  $\beta$ -catenin mutant footpad epidermis. (s–v") Co-IF for KRT9 & KRT10 in plantar epidermis from patients homozygous for WNT10A c.756+1G>A (s-t") or WNT10A c.391G>A (u-v") compared with similarly aged sex-matched controls. For qPCR, RNA levels were quantified in six control & six mutant (P40) or four control & four mutant (P20-100) samples with three technical replicates for each, & normalized to β-actin mRNA. Significance was calculated with two-tailed Student's ttest. Error bars indicate s.e.m. Scale bar, 25 µm (e-l) or 50 µm (a-d,n-q,s-v"). Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/ncomms15397), licensed under a CC-BY license. Not internally tested by Novus Biologicals.





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Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - WNT10A/β-catenin signalling is required for regionspecific differentiation.(a-d) Filiform papillae are present in Wnt10a-/- & inducible β-catenin mutant dorsal tongue (vellow arrows), but horny structures & expression of hard keratins (in situ hybridization, purple signals) are decreased (red arrows). (e-I) Epithelial deletion of Wnt10a (e-f",i,j) or β-catenin (g-h",k,l) induced from P25, P110 or P15 as indicated causes decreased expression of nuclear β-catenin, LEF1 & HOXC13 (white arrows, LEF1+ proliferating cells; yellow arrows, HOXC13+ differentiating cells). (m) qPCR shows significantly decreased Hoxc13 levels in Wnt10a & β-catenin mutant tongue epithelium. (n-r) IF & qPCR reveal reduced levels of KRT9 protein (n-q) & mRNA (r) in Wnt10a-/- & inducible β-catenin mutant footpad epidermis. (s-v") Co-IF for KRT9 & KRT10 in plantar epidermis from patients homozygous for WNT10A c.756+1G>A (s-t") or WNT10A c.391G>A (u-v") compared with similarly aged sex-matched controls. For gPCR, RNA levels were quantified in six control & six mutant (P40) or four control & four mutant (P20-100) samples with three technical replicates for each, & normalized to β-actin mRNA. Significance was calculated with two-tailed Student's ttest. Error bars indicate s.e.m. Scale bar, 25 µm (e–I) or 50 µm (a-d,n-q,s-v"). Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/ncomms15397), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - WNT10A/β-catenin signalling is required for regionspecific differentiation.(a-d) Filiform papillae are present in Wnt10a-/- & inducible  $\beta$ -catenin mutant dorsal tongue (yellow arrows), but horny structures & expression of hard keratins (in situ hybridization, purple signals) are decreased (red arrows). (e-I) Epithelial deletion of Wnt10a (e-f'',i,j) or  $\beta$ -catenin (g-h'',k,l) induced from P25, P110 or P15 as indicated causes decreased expression of nuclear β-catenin, LEF1 & HOXC13 (white arrows, LEF1+ proliferating cells; yellow arrows, HOXC13+ differentiating cells). (m) qPCR shows significantly decreased Hoxc13 levels in Wnt10a & β-catenin mutant tongue epithelium. (n-r) IF & qPCR reveal reduced levels of KRT9 protein (n-q) & mRNA (r) in Wnt10a-/- & inducible β-catenin mutant footpad epidermis. (s-v") Co-IF for KRT9 & KRT10 in plantar epidermis from patients homozygous for WNT10A c.756+1G>A (s-t") or WNT10A c.391G>A (u-v") compared with similarly aged sex-matched controls. For gPCR, RNA levels were quantified in six control & six mutant (P40) or four control & four mutant (P20-100) samples with three technical replicates for each, & normalized to β-actin mRNA. Significance was calculated with two-tailed Student's ttest. Error bars indicate s.e.m. Scale bar, 25 µm (e-I) or 50 µm (a–d,n–q,s–v"). Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/ncomms15397), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



Control





Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - WNT10A/β-catenin signalling is required for regionspecific differentiation.(a-d) Filiform papillae are present in Wnt10a-/- & inducible  $\beta$ -catenin mutant dorsal tongue (yellow arrows), but horny structures & expression of hard keratins (in situ hybridization, purple signals) are decreased (red arrows). (e–I) Epithelial deletion of Wnt10a (e-f",i,j) or β-catenin (g-h",k,l) induced from P25, P110 or P15 as indicated causes decreased expression of nuclear β-catenin, LEF1 & HOXC13 (white arrows, LEF1+ proliferating cells; yellow arrows, HOXC13+ differentiating cells). (m) qPCR shows significantly decreased Hoxc13 levels in Wnt10a &  $\beta$ -catenin mutant tongue epithelium. (n–r) IF & qPCR reveal reduced levels of KRT9 protein (n-q) & mRNA (r) in Wnt10a-/- & inducible β-catenin mutant footpad epidermis. (s-v") Co-IF for KRT9 & KRT10 in plantar epidermis from patients homozygous for WNT10A c.756+1G>A (s-t") or WNT10A c.391G>A (u-v") compared with similarly aged sex-matched controls. For gPCR, RNA levels were quantified in six control & six mutant (P40) or four control & four mutant (P20-100) samples with three technical replicates for each, & normalized to β-actin mRNA. Significance was calculated with two-tailed Student's ttest. Error bars indicate s.e.m. Scale bar, 25 µm (e–I) or 50 µm (a-d,n-q,s-v"). Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/ncomms15397). licensed under a CC-BY license. Not internally tested by Novus Biologicals.

Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - Oxidative stress-induced dissociation of adherens junctions results in nuclear translocation of β-catenin & an increase of EMT-related factors in mouse RPE.(A) Immunofluorescence of mouse RPE flat-mounts. Mice were injected with NaIO3 (15 mg/kg body weight) on Day 0, & the localization of  $\beta$ -catenin (green) & P-cadherin (red) was analyzed along with nuclear stain by DAPI (blue) on Days 0 (a-c), 1 (d-f), 3 (q-i) & 7 (j-l). Double staining: β-catenin (a, d, g, j), P-cadherin (b, e, h, k), & merged images with DAPI (c, f, i, l). The localization of  $\beta$ -catenin & P-cadherin at the cell-cell border was significantly disrupted, & instead prominently detected on/in the nucleus on Day 3. (B) Immunofluorescence of mouse retinal sections with a focus on the RPE nuclei. Mice were injected with NaIO3 (15 mg/kg body weight) on Day 0, & the localization of  $\beta$ -catenin (green) & P-cadherin (red) was analyzed along with nuclear stain by DAPI (blue) on Days 0 (m-o) & 3 (two representative nuclei; p-r & s-u). Double staining: β-catenin (m, p, s), Pcadherin (n, q, t), & merged images with DAPI (o, r, u). On Day 3, β-catenin was detected in the nuclei of mouse RPE. (C) Western blot analyses of mouse RPE proteins. Mice were injected with NaIO3 (15 mg/kg body weight) on Day 0, & RPE protein lysates were prepared on Days 0, 1, 3, & 7. The protein levels were analyzed using Western blotting with antibodies against P-cadherin,  $\beta$ -catenin, SNAI1 (Snail), vimentin, & control β-actin. The protein levels of β-catenin & SNAI1 increased similarly on Day 1 following oxidative stress. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/29338041), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

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Western Blot: beta-Catenin Antibody [NBP1-32239] - Whole cell extract (30 ug) was separated by 7.5% SDS-PAGE, and the membrane was blotted with beta-Catenin antibody (NBP1-32239) diluted at 1:1000. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody, and the signal was developed with Trident ECL plus-Enhanced.



Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] beta-Catenin antibody detects beta-Catenin protein at cell membrane by immunohistochemical analysis.Sample: Paraffin-embedded cat liver.beta-Catenin stained by beta-Catenin antibody (NBP1-32239) diluted at 1:500.Antigen Retrieval: Citrate buffer, pH 6.0, 15 min

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] beta-Catenin antibody detects beta-Catenin protein at cell membrane by immunohistochemical analysis.Sample: Paraffin-embedded cat colon.beta-Catenin stained by beta-Catenin antibody (NBP1-32239) diluted at 1:500.Antigen Retrieval: Citrate buffer, pH 6.0, 15 min



Immunohistochemistry: beta-Catenin Antibody [NBP1-32239] - beta-Catenin antibody [N1N2-2], N-term detects Ctnnb1 protein on zebrafish by whole mount immunohistochemical analysis. Sample: 2 days-post-fertilization zebrafish embryo. beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) dilution: 1:100.





Western Blot: beta-Catenin Antibody [NBP1-32239] - Various tissue extracts (30 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with beta-Catenin antibody (NBP1-32239) diluted at 1:500. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody.



Immunohistochemistry: beta-Catenin Antibody [NBP1-32239] -Immunohistochemical analysis of agarose-embedded zebrafish embryo, using beta-Catenin antibody [N1N2-2], N-term NBP1-32239) at 1:100. dilution. (This image was provided courtesy of the Schilling Lab at UC, Irvine.)

Immunohistochemistry: beta-Catenin Antibody [NBP1-32239] - beta-Catenin antibody [N1N2-2], N-term detects Ctnnb1 protein on zebrafish by whole mount immunohistochemical analysis. Sample: 1 day-post-fertilization zebrafish embryo. beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) dilution: 1:100.

Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] beta-Catenin antibody [N1N2-2], N-term detects beta-Catenin protein by immunohistochemical analysis.Sample: Paraffin-embedded rat tissues.beta-Catenin stained by beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) diluted at 1:500.Antigen Retrieval: Citrate buffer, pH 6.0, 15 min







Immunocytochemistry/ Immunofluorescence: beta-Catenin Antibody [NBP1-32239] - beta-Catenin antibody detects beta-Catenin protein at cell membrane by immunofluorescent analysis.Sample: MDCK cells were fixed in 4% paraformaldehyde at RT for 15 min.Green: beta-Catenin stained by beta-Catenin antibody (NBP1-32239) diluted at 1:1000.

beta-Catenin antibody [N1N2-2] detects beta-Catenin protein at cell membrane in mouse colon by immunohistochemical analysis.

Immunohistochemistry: beta-Catenin Antibody [NBP1-32239] - beta-Catenin antibody [N1N2-2], N-term detects Ctnnb1 protein on zebrafish

beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) dilution: 1:100.

Sample: Paraffin-embedded mouse colon.

Blue: Hoechst 33342 staining.

Red: alpha Tubulin antibody [GT114] diluted at 1:500.

Antigen Retrieval: Citrate buffer, pH 6.0, 15 min

by whole mount immunohistochemical analysis. Sample: 2 days-post-fertilization zebrafish embryo.

Immunohistochemistry: beta-Catenin Antibody [NBP1-32239] -Immunohistochemical analysis of paraffin-embedded zebrafish tissue, using beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) at 1:300 dilution.





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Immunohistochemistry-Paraffin: beta-Catenin Antibody [NBP1-32239] beta-Catenin antibody [N1N2-2], N-term detects beta-Catenin protein by immunohistochemical analysis.Sample: Paraffin-embedded mouse tissues.beta-Catenin stained by beta-Catenin antibody [N1N2-2], N-term (NBP1-32239) diluted at 1:500.Antigen Retrieval: Citrate buffer, pH 6.0, 15 min



Western Blot: beta-Catenin Antibody [NBP1-32239] - Whole cell extract (30 ug) was separated by 7.5% SDS-PAGE, and the membrane was blotted with beta-Catenin antibody (NBP1-32239) diluted at 1:1000. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody.



Western Blot: beta-Catenin Antibody [NBP1-32239] - Wild-type (WT) and beta Catenin knockout (KO) 293T cell extracts (9 ug) were separated by 7.5% SDS-PAGE, and the membrane was blotted with beta Catenin antibody [N1N2-2], N-term diluted at 1:1000. The HRP-conjugated anti-rabbit IgG antibody was used to detect the primary antibody.





#### **Publications**

Buechel D, Sugiyama N, Rubinstein N Et al. Parsing beta-catenin's cell adhesion and Wnt signaling functions in malignant mammary tumor progression Proceedings of the National Academy of Sciences of the United States of America 2021-08-24 [PMID: 34408016] (IP, Mouse)

Borrelli C, Valenta T, Handler K et al. Differential regulation of beta-catenin-mediated transcription via N- and Cterminal co-factors governs identity of murine intestinal epithelial stem cells Nature communications 2021-03-01 [PMID: 33649334] (WB)

Cao J, Liu D, Zhao S et al. Estrogen attenuates TGF-beta 1-induced EMT in intrauterine adhesion by activating Wnt/beta-catenin signaling pathway Braz. J. Med. Biol. Res. 2020-07-06 [PMID: 32638833] (WB, Human)

Saxena M, Kalathur RKR, Rubinstein N et al. A Pygopus 2-histone interaction is critical for cancer cell dedifferentiation and progression in malignant breast cancer Cancer Res. 2020-06-25 [PMID: 32586983] (IF/IHC, Mouse)

Buchel DM Wnt/beta-catenin signaling in malignant mammary tumor progression and metastasis formation & Mechanisms of evasive resistance to sorafenib in hepatocellular carcinoma Thesis (Chemotaxis, IP, Human)

Yang X, Chung JY, Rai U, Esumi N. Cadherins in the retinal pigment epithelium (RPE) revisited: P-cadherin is the highly dominant cadherin expressed in human and mouse RPE in vivo PLoS ONE 2018-01-16 [PMID: 29338041] (ICC/IF, WB, Mouse)

Xu M, Horrell J, Snitow M et al. WNT10A mutation causes ectodermal dysplasia by impairing progenitor cell proliferation and KLF4-mediated differentiation. Nat Commun. 2017-06-07 [PMID: 28589954] (PLA, Mouse)

Jin X, Li T, Zhang L et al. Environmental Enrichment Improves Spatial Learning and Memory in Vascular Dementia Rats with Activation of Wnt/b-Catenin Signal Pathway. Med. Sci. Monit. 2017-01-13 [PMID: 28082734] (WB, Rat)





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#### Products Related to NBP1-32239

HAF008	Goat anti-Rabbit IgG Secondary Antibody [HRP]
NB7160	Goat anti-Rabbit IgG (H+L) Secondary Antibody [HRP]
NBP2-24891	Rabbit IgG Isotype Control
NBP2-61628PEP	beta-Catenin Recombinant Protein Antigen

#### 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.

For more information on our 100% guarantee, please visit www.novusbio.com/guarantee

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