# **Product Datasheet**

# ZEB1 Antibody NBP1-05987

Unit Size: 0.1 ml

Store at 4C. Do not freeze.

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# NBP1-05987

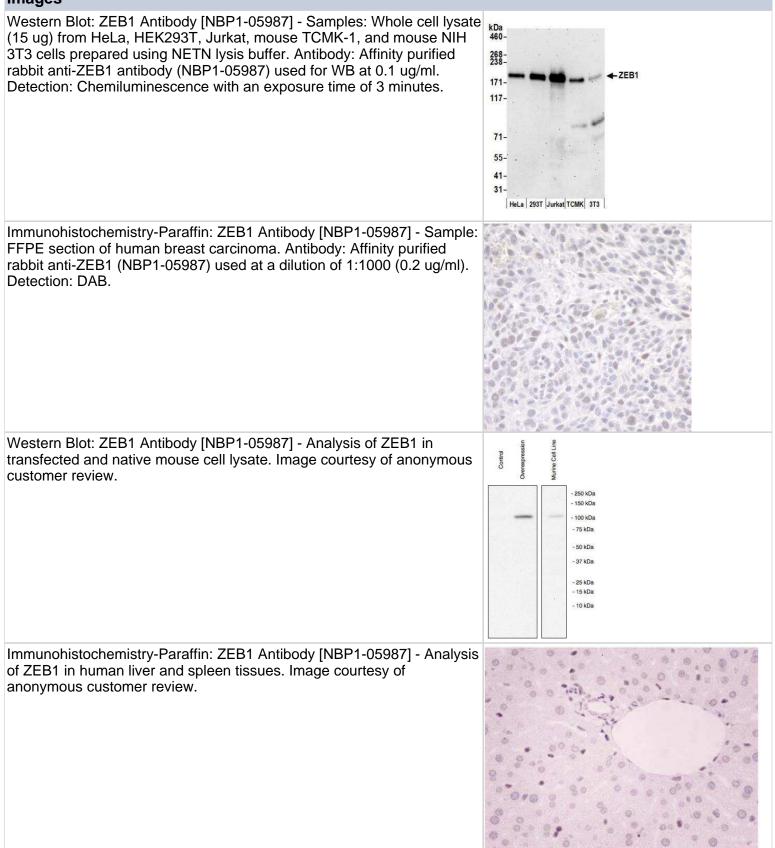
ZEB1 Antibody

-	
Product Information	
Unit Size	0.1 ml
Concentration	0.2 mg/ml
Storage	Store at 4C. Do not freeze.
Clonality	Polyclonal
Preservative	0.09% Sodium Azide
Isotype	IgG
Purity	Immunogen affinity purified
Buffer	TBS and 0.1% BSA
Product Description	
Host	Rabbit
Gene ID	6935
Gene Symbol	ZEB1
Species	Human, Mouse, Rat
Reactivity Notes	Rat reactivity reported in scientific literature (PMID: 28783105).
Marker	Mesenchymal Cells Marker
Immunogen	The immunogen recognized by this antibody maps to a region between residue 1074 and 1124 of human zinc finger E-box binding homeobox 1 using the numbering given in entry NP_110378.3
Product Application Details	
Applications	Western Blot, Simple Western, Gel Super Shift Assays, Immunocytochemistry/ Immunofluorescence, Immunohistochemistry, Immunohistochemistry-Paraffin, Immunoprecipitation, Microarray, Chromatin Immunoprecipitation (ChIP), Knockdown Validated, Single Cell Western
Recommended Dilutions	Western Blot 1:2000-1:10000, Simple Western 1:50, Immunohistochemistry 1:200-1:1000, Immunocytochemistry/ Immunofluorescence Reactivity reported in scientific literature (PMID: 24334458), Immunoprecipitation 2-5 ug/mg lysate, Immunohistochemistry-Paraffin 1:200-1:1000, Gel Super Shift Assays Reported in scientific literature (PMID: 21771782), Microarray Reported in scientific literature (PMID: 28955722), Chromatin Immunoprecipitation (ChIP) Reported in scientific literature (PMID: 29744893), Single Cell Western 100 ug/ml, Knockdown Validated Reported in scientific literature (PMID: 31776338)
Application Notes	In Simple Western only 10 - 15 uL of the recommended dilution is used per data point. See <u>Simple Western Antibody Database</u> for Simple Western validation: Tested in Jurkat lysate 0.5 mg/mL, separated by Size, antibody dilution of 1:50, apparent MW was 170 kDa. Separated by Size-Wes, Sally Sue/Peggy Sue. IHC-P-Epitope retrieval with citrate buffer pH6.0 is recommended for FFPE tissue sections.

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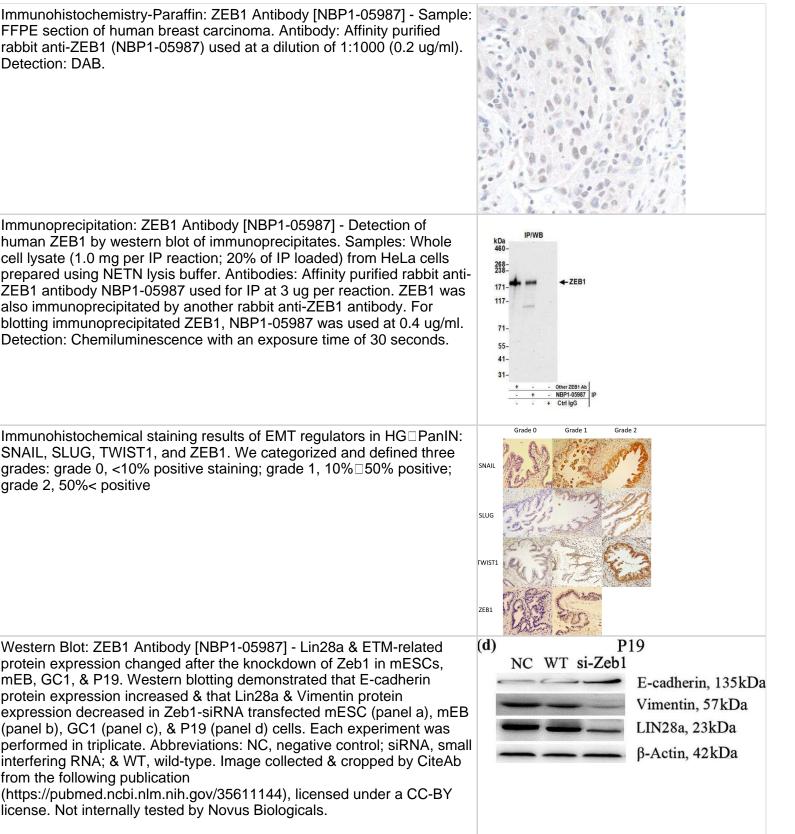


#### Images



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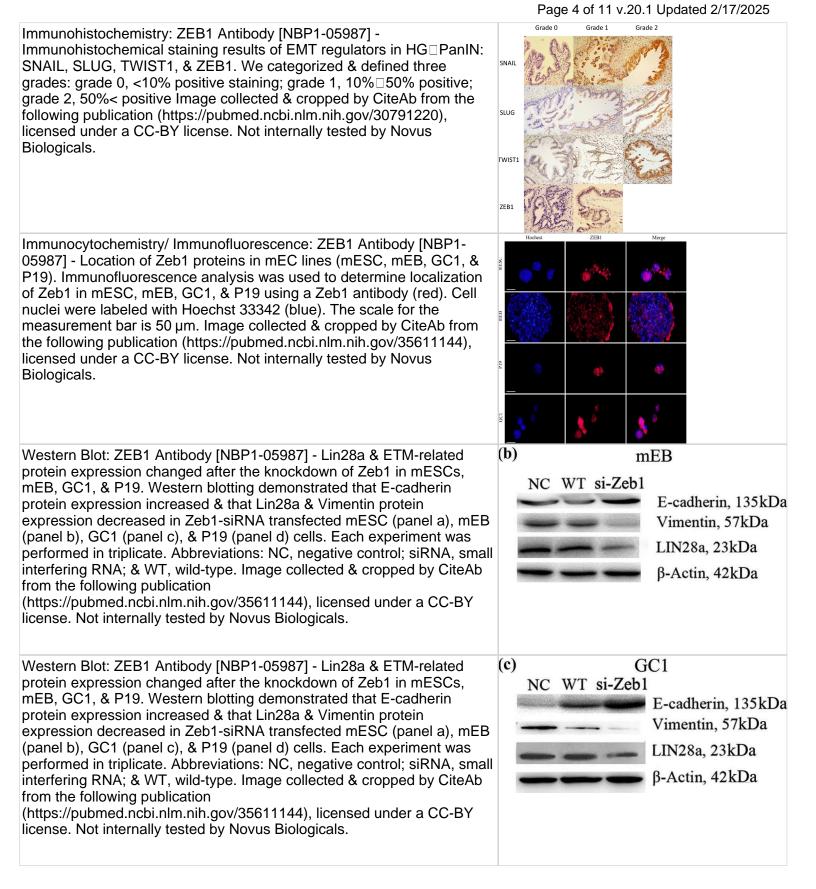
human ZEB1 by western blot of immunoprecipitates. Samples: Whole cell lysate (1.0 mg per IP reaction; 20% of IP loaded) from HeLa cells prepared using NETN lysis buffer. Antibodies: Affinity purified rabbit anti-ZEB1 antibody NBP1-05987 used for IP at 3 ug per reaction. ZEB1 was also immunoprecipitated by another rabbit anti-ZEB1 antibody. For blotting immunoprecipitated ZEB1, NBP1-05987 was used at 0.4 ug/ml. Detection: Chemiluminescence with an exposure time of 30 seconds.

Immunohistochemical staining results of EMT regulators in HG PanIN: SNAIL, SLUG, TWIST1, and ZEB1. We categorized and defined three grades: grade 0, <10% positive staining; grade 1, 10% 50% positive; grade 2, 50% < positive

Western Blot: ZEB1 Antibody [NBP1-05987] - Lin28a & ETM-related protein expression changed after the knockdown of Zeb1 in mESCs, mEB, GC1, & P19. Western blotting demonstrated that E-cadherin protein expression increased & that Lin28a & Vimentin protein expression decreased in Zeb1-siRNA transfected mESC (panel a), mEB (panel b), GC1 (panel c), & P19 (panel d) cells. Each experiment was performed in triplicate. Abbreviations: NC, negative control; siRNA, small interfering RNA; & WT, wild-type. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/35611144), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



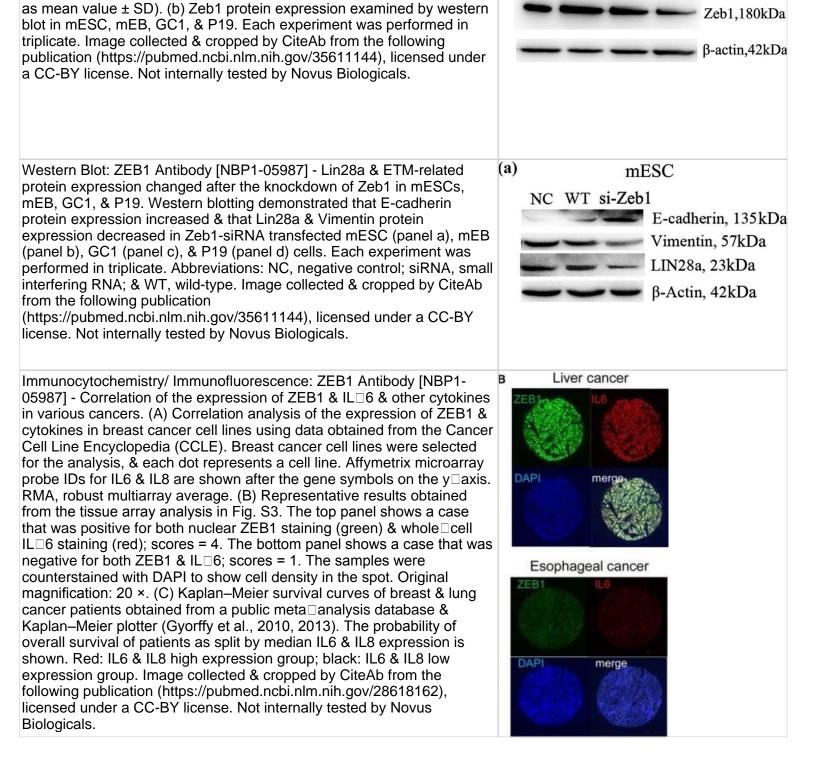






Western Blot: ZEB1 Antibody [NBP1-05987] - Zeb1 expression in mESCs, mEB, GC1, & P19. (a) Zeb1 mRNA expression detected by

real-time qPCR in mESC, mEB, GC1, & P19 (P < 0.001, data presented



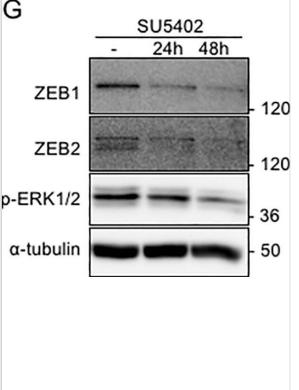
GC1

P19

(b)

mESC mEB

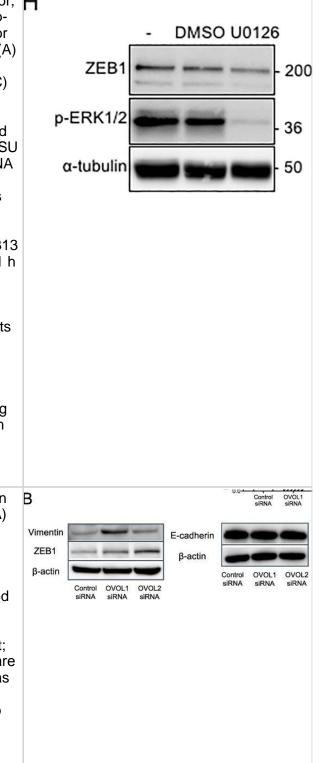
Western Blot: ZEB1 Antibody [NBP1-05987] - SU5402, FGFR1 inhibitor, G affects the EMT transcription factors.(A, B) ERK1/2 phosphorylation (p-ERK1/2) determined by immunoblotting in HSC-4 & OTC-04 treated for 30 min w/ 30 ng/ml FGF2 or 30 ng/ml FGF7 in presence of 10% FBS (A) & in TSU & HOC313 cells treated for 1 h w/ 30 ng/ml FGF2 or 30 µM SU5402 in absence of FBS (B). F2, FGF2; F7, FGF7; SU, SU5402. (C) We have previously reported that, after treatment w/ TGF-β, NMuMG cells underwent EMT w/ the IIIc-isoform of FGFR1[17]. After NMuMG cells pretreated w/ TGF-β transfected w/ mouse Fgfr1 siRNA or treated w/ SU5402, the cells further incubated in culture medium (CM) from TSU cells. SU, SU5402; siFR1, siRNA against mouse Fgfr1. (D)FGF2 mRNA levels determined by RT-qPCR analyses. The ratio of FGF2 mRNA to GAPDH mRNA in HSC-4 cells indicated as "1". Each value represents the mean ± SD of triplicate determinations from a representative experiment. Similar results obtained in at least three independent experiments. (E) ERK1/2 phosphorylation (p-ERK1/2) in TSU & HOC313 cells monitored in presence of indicated concentration of SU5402 for 1 h under serum-free culture conditions, followed by immunoblot analysis. (F, G) Expression of indicated genes in TSU cells under serum-free culture conditions determined by RT-qPCR (F) & immunoblot (G) analyses, following treatment w/ 10 µM SU5402. Each value represents the mean  $\pm$  SD of triplicate determinations from a representative experiment. Similar results obtained from at least three independent experiments. p values determined by Student's t-test. \*\*p < 0.01. (H) TSU cells treated w/ 10 µM U0126 in absence of FBS subjected to immunoblotting w/ the indicated antibodies.  $\alpha$ -tubulin used as a loading control (A, B, C, E, G, & H). Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/31682640), licensed under a CC-BY license. Not internally tested by Novus Biologicals.



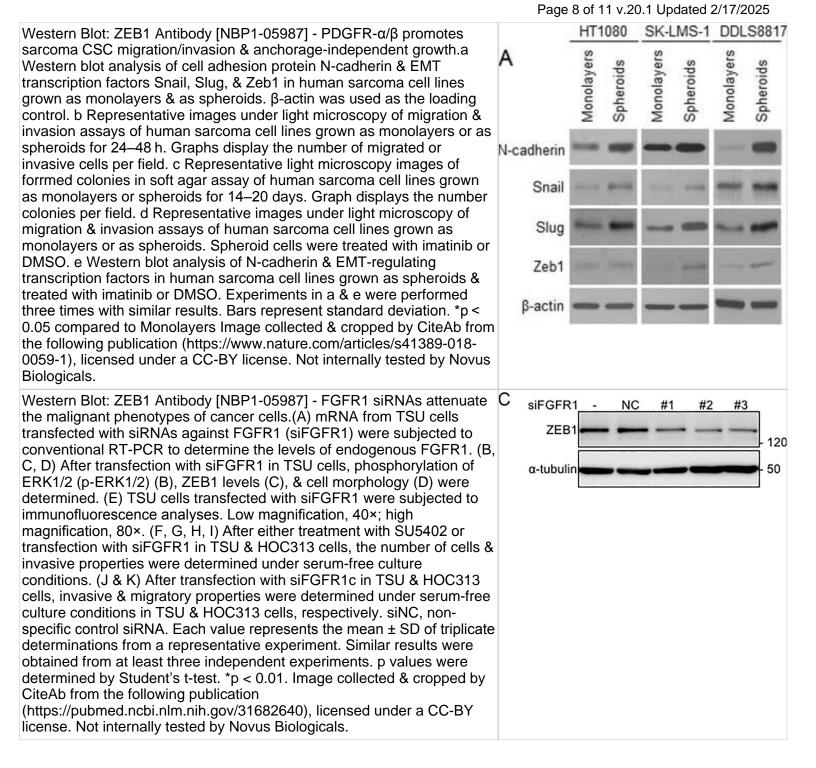


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set to 1. p-values < 0.05 were assumed to indicate a statistically significant difference; \* p < 0.05. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/32106476), licensed under a CC-BY license. Not internally tested by Novus Biologicals.









Page 9 of 11 v.20.1 Updated 2/17/2025 HT1080 SK-LMS-1 DDLS8817 Western Blot: ZEB1 Antibody [NBP1-05987] - PDGFR-α/β promotes Е sarcoma CSC migration/invasion & anchorage-independent growth.a Spheroids Spheroids Spheroids Western blot analysis of cell adhesion protein N-cadherin & EMT Imatinib Imatinib transcription factors Snail, Slug, & Zeb1 in human sarcoma cell lines matinib DMSO DMSO DMSO grown as monolayers & as spheroids. β-actin was used as the loading control. b Representative images under light microscopy of migration & invasion assays of human sarcoma cell lines grown as monolayers or as spheroids for 24-48 h. Graphs display the number of migrated or N-cadherin invasive cells per field. c Representative light microscopy images of forrmed colonies in soft agar assay of human sarcoma cell lines grown Snail as monolayers or spheroids for 14-20 days. Graph displays the number colonies per field. d Representative images under light microscopy of migration & invasion assays of human sarcoma cell lines grown as Slug monolayers or as spheroids. Spheroid cells were treated with imatinib or DMSO. e Western blot analysis of N-cadherin & EMT-regulating Zeb1 transcription factors in human sarcoma cell lines grown as spheroids & treated with imatinib or DMSO. Experiments in a & e were performed three times with similar results. Bars represent standard deviation. \*p < **B**-actin 0.05 compared to Monolayers Image collected & cropped by CiteAb from the following publication (https://www.nature.com/articles/s41389-018-0059-1), licensed under a CC-BY license. Not internally tested by Novus Biologicals. P21 P21 Western Blot: ZEB1 Antibody [NBP1-05987] - Nav1.4 protein levels are D 2B/-2B/ ctrl ctrl decreased in muscles from mouse models of SMA. (A) Immunoblot analysis using muscle lysate from P2, P5, P9, & P21 wild type mice. NF ZEB Nav1.4 protein levels increase during postnatal muscle development & form the predominant sodium channel expressed in mature skeletal GAPDH GAPDH muscle. GAPDH served as a loading control (N = 3). (B) Representative immunoblot with quantification, showing a decrease in levels of sodium channel Nav1.4 & Nav1.5 in P5 Smn-/-;SMN2 hindlimb muscle compared with controls (N = 3). (C) Quantification of immunoblot analyses in P21 Smn2B/- & control hindlimb muscles revealed a decrease in Nav1.4 levels. Early in postnatal muscle development, the Nav1.5 sodium channel isoform is the most predominant. In P21 Smn2B/- mice, the protein levels of Nav1.5 are higher than in controls (N = 3). (D) The protein level of the Nav1.4 positive regulator, NF1, is not altered in muscles from P21 Smn2B/- mice. Similarly, no change was detected in the protein levels of the Nav1.4 repressor ZEB. (E) Expression of sodium channel Nav1.4 in control sham & denervated samples 1 & 7 days post-denervation was assessed by immunoblot (N = A decrease in the levels of Nav1.4 in muscle was noted at 7 days post-denervation. \*, P < 0.05; \*\*, P < 0.01. Image collected & cropped by CiteAb from the following publication (https://pubmed.ncbi.nlm.nih.gov/24119341), licensed under a CC-BY license. Not internally tested by Novus Biologicals.

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#### **Publications**

Kim SY, Kim J, Kim H et Al. Fluorescence-guided tumor visualization of colorectal cancer using tumor-initiating probe yellow in preclinical models Sci Rep 2024-11-06 [PMID: 39505985]

Seok Han B, Ko S, Seok Park M et Al. Lidocaine combined with general anesthetics impedes metastasis of breast cancer cells via inhibition of TGF-?/Smad-mediated EMT signaling by reprogramming tumor-associated macrophages Int Immunopharmacol 2024-09-22 [PMID: 39312860]

Borrelli, C;Roberts, M;Eletto, D;Hussherr, MD;Fazilaty, H;Valenta, T;Lafzi, A;Kretz, JA;Guido Vinzoni, E;Karakatsani, A;Adivarahan, S;Mannhart, A;Kimura, S;Meijs, A;Baccouche Mhamedi, F;Acar, IE;Handler, K;Ficht, X;Platt, RJ;Piscuoglio, S;Moor, AE; In vivo interaction screening reveals liver-derived constraints to metastasis Nature 2024-07-24 [PMID: 39048831]

M Song, OO Yeku, S Rafiq, T Purdon, X Dong, L Zhu, T Zhang, H Wang, Z Yu, J Mai, H Shen, B Nixon, M Li, RJ Brentjens, X Ma Tumor derived UBR5 promotes ovarian cancer growth and metastasis through inducing immunosuppressive macrophages Nature Communications, 2020-12-08;11(1):6298. 2020-12-08 [PMID: 33293516] (Western Blot)

Kinouchi A, Jubashi T, Tatsuno R et al. Roles of ZEB1 and ZEB2 in E-cadherin expression and cell aggressiveness in head and neck cancer. Genes to cells : devoted to molecular & cellular mechanisms 2024-10-03 [PMID: 39362647]

Massimo Saini, Laura Schmidleitner, Helena Domínguez Moreno, Elisa Donato, Mattia Falcone, Johanna M Bartsch, Corinna Klein, Vanessa Vogel, Roberto Würth, Nicole Pfarr, Elisa Espinet, Mareike Lehmann, Melanie Königshoff, Manuel Reitberger, Simon Haas, Elisabeth Graf, Thomas Schwarzmayr, Tim-Matthias Strom, Saskia Spaich, Marc Sütterlin, Andreas Schneeweiss, Wilko Weichert, Gunnar Schotta, Maximilian Reichert, Nicola Aceto, Martin R Sprick, Andreas Trumpp, Christina H Scheel Resistance to mesenchymal reprogramming sustains clonal propagation in metastatic breast cancer. Cell reports 2023-10-04 [PMID: 37257449]

KM McAndrews, K Vázquez-Ar, C Kwak, H Sugimoto, X Zheng, B Li, ML Kirtley, VS LeBleu, R Kalluri &alphaSMA+ fibroblasts suppress Lgr5+ cancer stem cells and restrain colorectal cancer progression Oncogene, 2021-06-09;0(0):. 2021-06-09 [PMID: 34108617]

Samlai Vedovatto, Fernanda Dittrich Oliveira, Luiza Cherobini Pereira, Thamiris Becker Scheffel, Liziane Raquel Beckenkamp, Ana Paula Santin Bertoni, Márcia Rosângela Wink, Guido Lenz CD73 mitigates ZEB1 expression in papillary thyroid carcinoma Cell Communication and Signaling : CCS 2024-02-22 [PMID: 38388432]

Shigeo Otake, Yuka Itoh, Chiho Omata, Masao Saitoh, Keiji Miyazawa ZEB1 and oncogenic Ras constitute a regulatory switch for stimulus dependent E cadherin downregulation Cancer Science 2020-11-09 [PMID: 33068045]

María Lasierra Losada, Melissa Pauler, Niels Vandamme, Steven Goossens, Geert Berx, Moritz Leppkes, Harald Schuhwerk, Simone Brabletz, Thomas Brabletz, Marc P. Stemmler Pancreas morphogenesis and homeostasis depends on tightly regulated Zeb1 levels in epithelial cells Cell Death Discovery 2021-06-11 [PMID: 34112759]

Lee JE, Park J, Kim EJ et al. Noggin contributes to brain metastatic colonization of lung cancer cells Cancer cell international 2023-11-28 [PMID: 38012621] (WB, Human)

Details: Dilution 1:1000

Takeuchi K, Tabe S, Takahashi K et al. Incorporation of human iPSC-derived stromal cells creates a pancreatic cancer organoid with heterogeneous cancer-associated fibroblasts Cell reports 2023-11-28 [PMID: 37955987] (IHC-P, Human)

More publications at <a href="http://www.novusbio.com/NBP1-05987">http://www.novusbio.com/NBP1-05987</a>





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#### Products Related to NBP1-05987

NBL1-18010	ZEB1 Overexpression Lysate
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

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