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612 **SUPPLEMENTARY FIGURE LEGENDS**

613

614 **Figure S1. Cell adhesion on human SNED1 and murine Sned1**

615 (A) Coomassie-blue-stained polyacrylamide gel showing the quality and purity of affinity-purified
616 full-length SNED1-His.

617 (B) Murine O9-1 neural crest cells adhere to the same extent to human SNED1 and murine Sned1.
618 Data is represented as mean \pm SD from three biological experiments. Unpaired Student's two-
619 tailed t-test with Welch's correction was performed to test statistical significance. ns: non-
620 significant.

621 (C) Graph showing the adhesion of immortalized embryonic fibroblast cells isolated from *Sned1*
622 knockout mice (*Sned1*^{KO} iMEF) on increasing concentrations of Sned1.

623

624 **Figure S2. LM2 cell adhesion on equimolar concentration of full length SNED1 and**
625 **SNED1¹⁻²⁶⁰**

626 Graph showing LM2 cell adhesion on 66.3 μ M of full length SNED1 and SNED1¹⁻²⁶⁰.

627

628 **Figure S3. Purification of integrin-binding mutants of SNED1**

629 Coomassie-blue-stained polyacrylamide gels showing the quality and purity of affinity-purified
630 His-tagged SNED1^{RGE} (A), SNED1^{LAV} (B), and SNED1^{RGE/LAV} (C). The different bands
631 correspond to different levels of glycosylation of the proteins, as previously shown (Vallet et al.,
632 2021).

633

634 **Figure S4. The RGD motif in SNED1¹⁻²⁶⁰ is sufficient to mediate cell adhesion**

635 Adhesion of MDA-MB-231' LM2' breast cancer cells (A) and O9-1 neural crest cells (B) to the
636 N-terminal fragment of SNED1 (SNED1¹⁻²⁶⁰) is significantly decreased in presence of the integrin-
637 binding cRGDfV peptide. Data is represented as mean \pm SD from three biological experiments.
638 Unpaired Student's two-tailed t-test with Welch's correction was performed to determine
639 statistical significance. *p<0.05, ** p<0.01.

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642 **Figure S5. Functional blocking of integrin $\alpha 4$ does not affect breast cancer cell adhesion on**
643 **SNED1**

644 (A) Immunoblot on total cell extract from MDA-MB-231' LM2' and O9-1 cells showing $\alpha 4$
645 integrin expression.

646 (B) Adhesion of MDA-MB-231' LM2' breast cancer cells to SNED1 is not altered in presence of
647 anti- $\alpha 4$ integrin-blocking antibody. Data is represented as mean \pm SD from three biological
648 experiments. Unpaired Student's two-tailed t-test with Welch's correction was performed to test
649 statistical significance. ns: non-significant.

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651 **Figure S6. Immunoblot transparency**

652 Uncropped immunoblots for $\beta 1$ integrin, $\alpha 5$ integrin, αv integrin, $\beta 3$ integrin, and $\alpha 4$ integrin.

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653 **Supplementary Table 1: List of primers**

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Primer	Sequence	Purpose
BglII-KOZAK-ATG-SNED1Hs_F	5' TCGAAGATCTGCCACCATGCGGCACGGCGTCGC 3'	Subcloning SNED1 into retroviral pMSCV-IRES-Hygro vector
HpaI-Stop-His-SNED1Hs_R	5'GATGTTAACTTAGTGGTGATGGTGATGATGAGATTTCTCCAGTGTCTGACTCT TACT 3'	Shuttling of SNED1-His WT, RGE, LAV, or GE/LAV) into retroviral pMSCV-IRES-Hygro vector
HpaI-Stop-FLAG-NFS_R	5' CCGTAACTTACTTGTCTCATCGTCTTTGTAGTCGCACTGGGGAGGCTCAC 3'	Subcloning SNED1 ¹⁻⁵⁷¹ into retroviral pMSCV-IRES-Hygro vector with the addition of a C-terminal FLAG tag
HpaI-Stop-FLAG-NF_R	5' CCGTAACTTACTTGTCTCATCGTCTTTGTAGTCGACGCAGAGGTAGCTCCC 3'	Subcloning SNED1 ¹⁻⁵³⁰ into retroviral pMSCV-IRES-Hygro vector with the addition of a C-terminal FLAG tag
SNED1_c120a_F	5' CCGAGCGCGGCGAAGCCGTCACC 3'	Introduction of the c120>a (pG40E) point mutation to generate SNED1 ^{RGE}
SNED1_c120a_R	5' GGTGACGGCTTCGCCGCGCTCGG 3'	
SNED1_a932c_F	5' GGAGGTGCCACCTGGCCGTGAACGAATGTGC 3'	Introduction of the a932>c (pD311A) point mutation to generate SNED1 ^{LAV}
SNED1_a932c_R	5' GCACATTCGTTACGGCCAGGTGGCACCTCC 3'	

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656 **Supplementary Table 2: List of antibodies used for functional blocking and immunoblotting**

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Antibody	Host species	Reactivity	Application	Concentration used ($\mu\text{g/mL}$)	Catalog #
Anti- β 1 Integrin	Rat	Human	Functional blocking	10	Sigma, MABT821
Anti- α 5 Integrin	Rat	Human	Functional blocking	10	Sigma, MABT820
Anti- α 4 Integrin	Mouse	Human	Functional blocking	10	Sigma, MAB1383
Anti- β 1 Integrin	Hamster	Mouse	Functional blocking	10	BD Biosciences, BDB555002
Anti- α 5 Integrin	Rat	Mouse	Functional blocking	10	Biologend, 103817
Anti- α v β 3 Integrin	Mouse	Human	Functional blocking	10	Sigma, MAB1976Z
Rat IgG	Rat	Isotype control	Functional blocking	10	Invitrogen, PI31903
Mouse IgG	Mouse	Isotype control	Functional blocking	10	Invitrogen, PI31933
Hamster IgM	Hamster	Isotype control	Functional blocking	10	Biologend, 401014
Anti-SNED1	Rabbit	Human	Immunoblotting	1	Naba lab
Anti-His	Mouse	-	Immunoblotting	1	Sigma, SAB2702218
Anti-FLAG	Rabbit	-	Immunoblotting	1	Sigma, F7425
Anti- β 1 Integrin sera	Rabbit	Human, Mouse	Immunoblotting	1:1000 dilution	In-house
Anti- α 5 Integrin	Rabbit	Human, Mouse	Immunoblotting	0.217	Abcam, AB150361
Anti- α 4 Integrin	Rabbit	Human, Mouse	Immunoblotting	0.5	Invitrogen, MA5-27947
Anti- α v Integrin	Rabbit	Human, Mouse	Immunoblotting	1	Invitrogen, MA5-32195
Anti- β 3 Integrin	Rabbit	Human, Mouse	Immunoblotting	1	Invitrogen, MA5-32077

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Figure S1. Cell adhesion on human SNED1 and murine Sned1

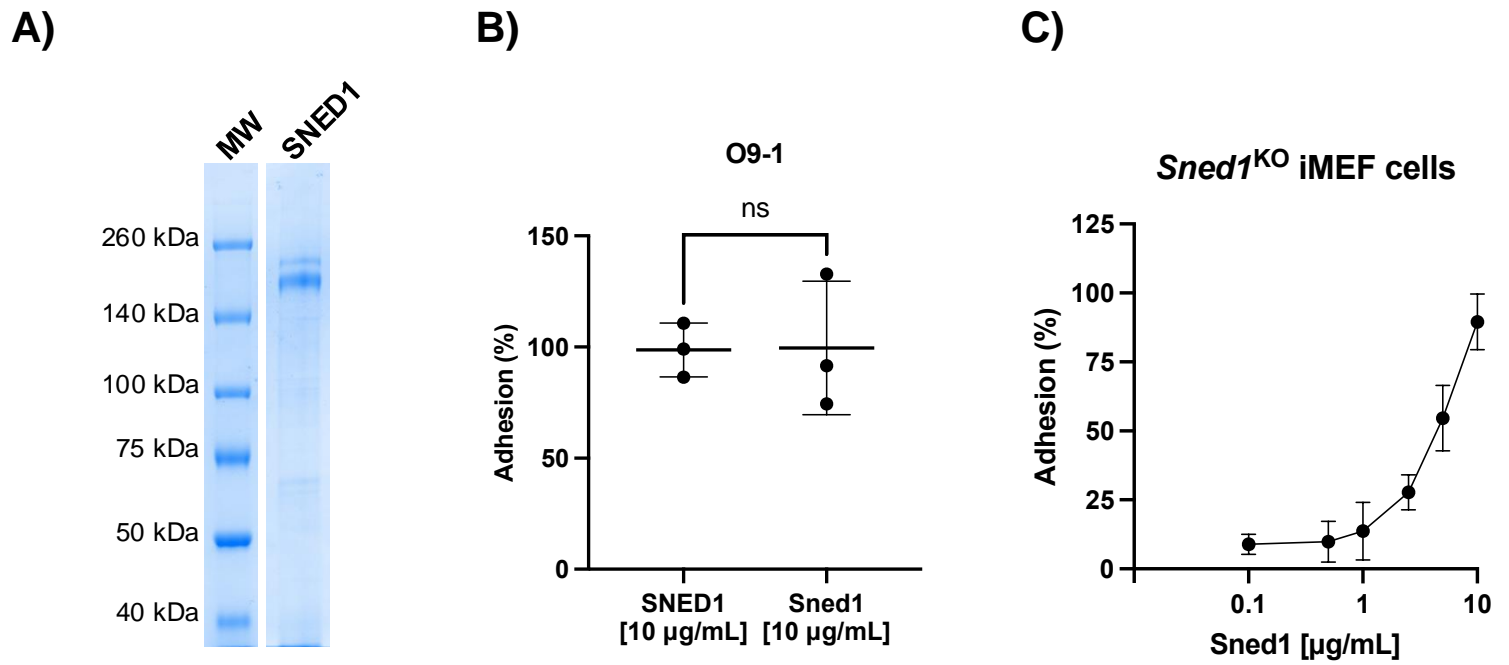


Figure S2. LM2 cell adhesion on equal molar concentration of full length SNED1 and SNED1¹⁻²⁶⁰

A)

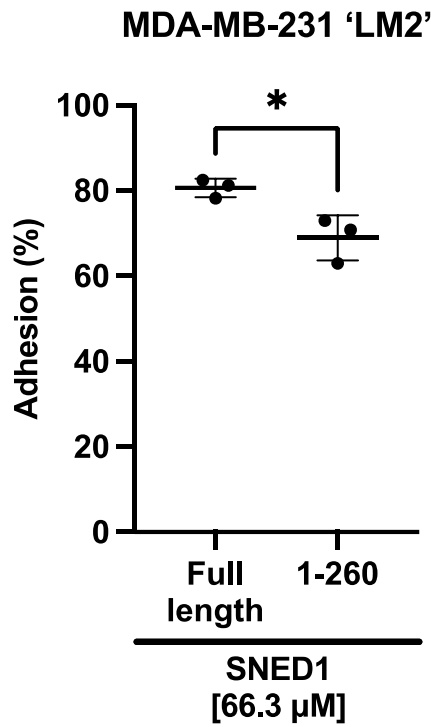


Figure S3. Purification of integrin binding mutants of SNED1

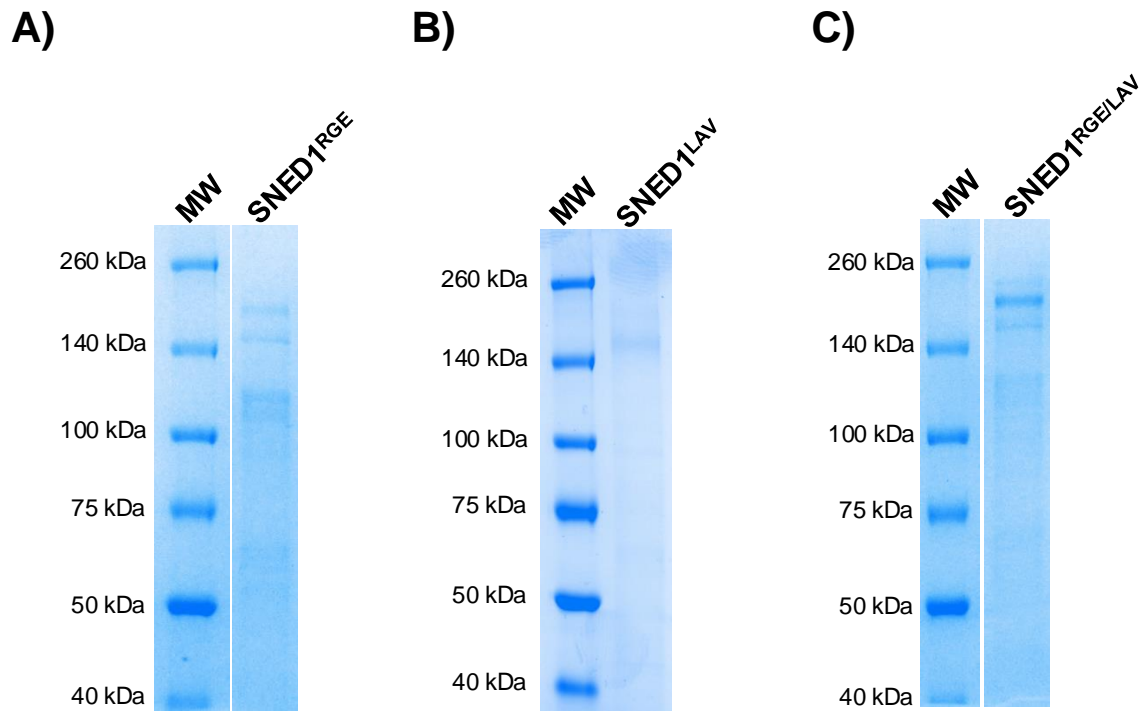


Figure S4. The RGD motif in SNED1¹⁻²⁶⁰ is required for cell adhesion

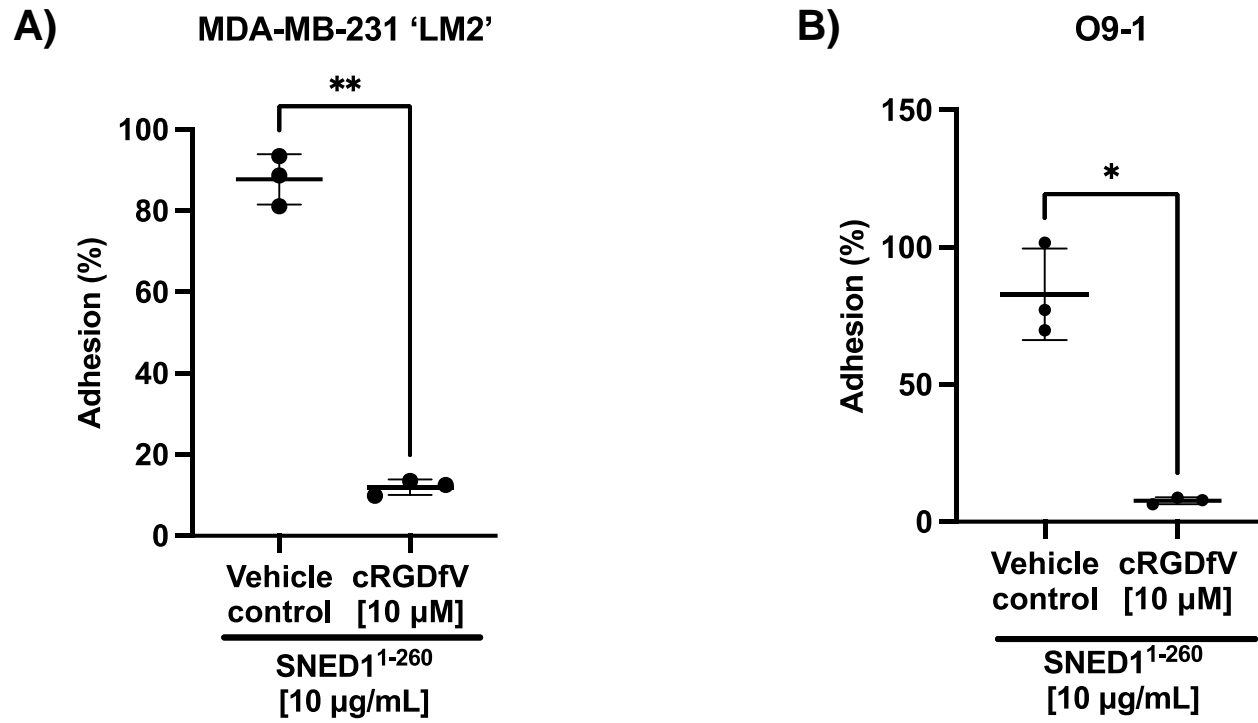
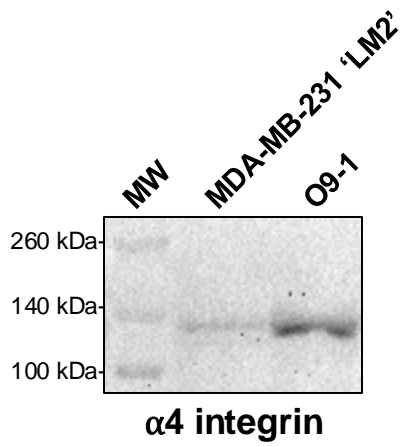


Figure S5. Functional blocking of $\alpha 4$ integrin does **not** affect breast cancer cell adhesion to SNED1

A)



B)

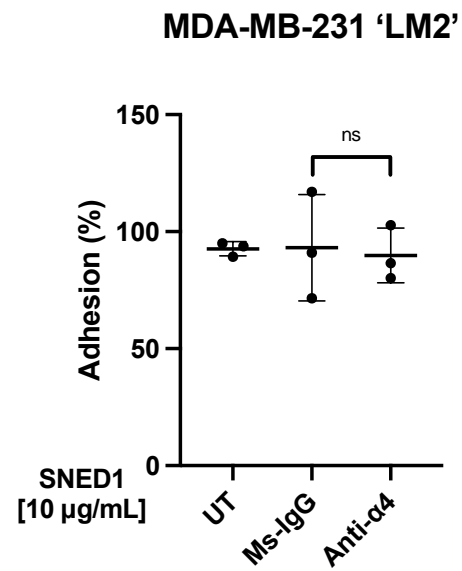


Figure S6. Immunoblot transparency

