

1 **Supplementary information**

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3 **Palmdelphin promotes myoblast differentiation and muscle**  
4 **regeneration**

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9 **Table S1.** Primers sequences (5' to 3')

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11	<b>Group and name</b>	<b>sequence</b>
12		
13	<b>Primers for gene cloning</b>	
14	Palmdelphin	F: GTGGGTACCATGGAAGAAGCTGAGCTG
15		R: CGCTCGAGTCAGATCACCTTTTTCCCCAGCTTG
16		
17	<b>Primers for qPCR</b>	
18	Palmdelphin	F: ATCTCACAGAAGCGTCTGAAAAT
19		R: CTGCCGATTCCATCCAGGAG
20	Myogenin	F: GCAATGCACTGGAGTTCG
21		R: ACGATGGACGTAAGGGAGTG
22	MyHC	F: AGCTTGAAAACGAGGTGGAA
23		R: CCTCCTCAGCCTGTCTCTTG
24	Myod	F: GCCTGAGCAAAGTGAATGAG
25		R: GCAGACCTTCGATGTAGCG
26	Myf5	F: CCTGTCTGGTCCCGAAAGAAC
27		R: GACGTGATCCGATCCACAATG
28	Pax7	F: CTGCTGAAGGACGGTCACTG
29		R: GGA TGCCATCGA TGCTGTGT
30	Mrf4	F: CTACATTGAGCGTCTACAGGACC
31		R: CTGAAGACTGCTGGAGGCTG
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34 **Table S2.** siGENOME Mouse Palmdelphin (114301) siRNA-SMARTpool, 5 nmol

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36	<b>SmartPool content</b>	<b>sequence</b>
37	Target sequence 1	CUACAUACCUUCCCGAUUA
38	Target sequence 2	GAAGUUAGGCCGUAUGAAA
39	Target sequence 3	UGUCAGAUUAACAUCGUU
40	Target sequence 4	GCAAAACGAACACGAAGUU

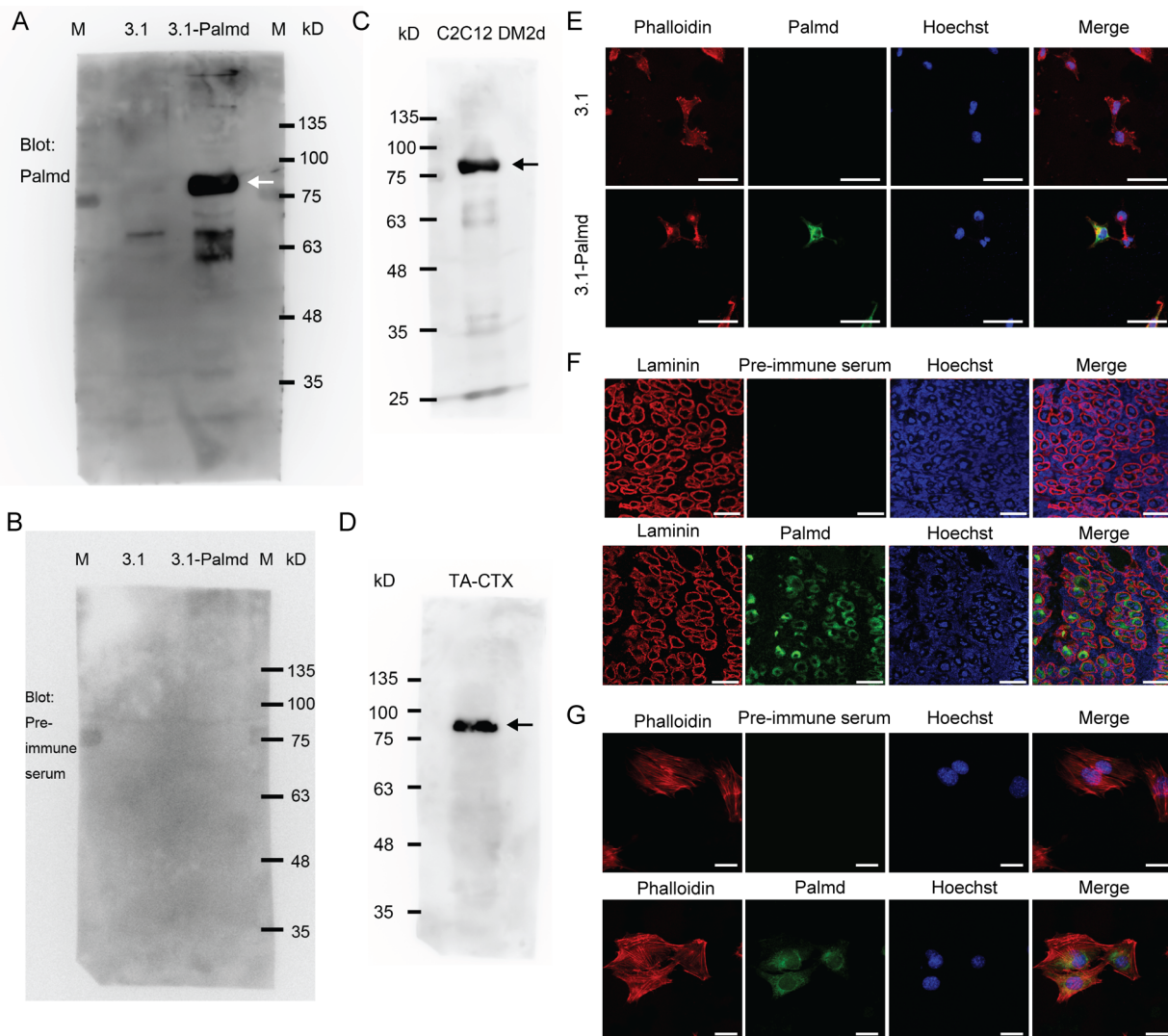
41

42 **Table S3.** Antigen peptide sequence

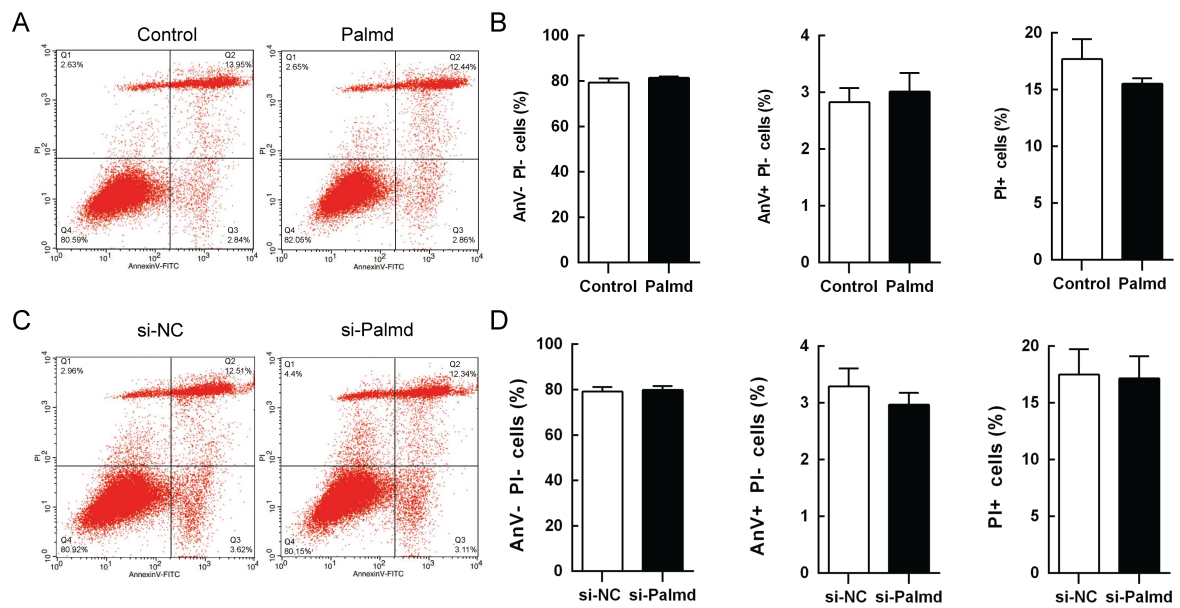
Epitope	Length	AA region	Term	Purity
NH2- CSERNKSPTEY HE-CONH2	14	246-258	Center	>90%

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45  
 46 Fig. S1. WB and IF validation of the Palmd antibody used in this research. (A) 293T cells  
 47 were transfected with pcDNA3.1 or pcDNA3.1-Palmd, 48 h later, cell protein extracts were  
 48 collected to perform WB. Palmd antibody was used as the primary antibody. White arrow  
 49 indicates the band of Palmd, between 75 kD and 100 kD. M: marker, 3.1: pcDNA3.1, 3.1-  
 50 Palmd: pcDNA3.1-Palmd. (B) Palmd antibody was replaced by pre-immune serum, the  
 51 negative control, to perform the same WB experiments in (A). (C) A full-length WB lane of  
 52 protein lysates from C2C12 cells differentiated for 2 days. Black arrow indicates the band of  
 53 Palmd. (D) A full-length WB lane of protein lysates from TA muscles 3 days after CTX  
 54 injury. Black arrow indicates the band of Palmd.. (E) 293T cells were transfected with  
 55 pcDNA3.1 or pcDNA3.1-Palmd, 48 h later, cells were stained with Phalloidin (red), Palmd  
 56 (green) and nucleus (blue). Scale bar = 50  $\mu$ m. (F) CTX injured TA muscle sections were  
 57 stained for Laminin (red) and nucleus (blue), and performed immunofluorescence staining  
 58 using pre-immune serum (upper group) or Palmd antibody (lower group) as the primary  
 59 antibody. Scale bar = 75  $\mu$ m. (G) C2C12 myoblasts were stained for Phalloidin (red) and  
 60 nucleus (blue), and performed immunofluorescence staining using pre-immune serum (upper  
 61 group) or Palmd antibody (lower group) as the primary antibody. Scale bar = 25  $\mu$ m.



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63 Fig. S2. Palmd does not influence cell apoptosis and necrosis during myoblast differentiation.

64 (A) C2C12 cells were transfected with overexpression plasmids pcDNA3.1 (control) or  
65 pcDNA3.1-Palmd (Palmd). 48 hours later, cells were induced to differentiate and incubated

66 for 12 h, followed by double staining with propidium iodide (PI) and annexin V (AnV). PI

67 AnV<sup>-</sup> populations were identified as viable cells, PI<sup>-</sup>AnV<sup>+</sup> populations were defined as

68 apoptotic cells and PI<sup>+</sup> populations indicated necrotic cells. (B) Percentage of viable (left

69 panel), apoptotic (middle panel), or necrotic (right panel) cells from the data described in (A)

70 was calculated. Data are presented as mean ± s.e.m. , n = 3 per group. (C) C2C12 cells were

71 transfected with si-NC or si-Palmd. 48 hours later, cells were induced to differentiate and

72 incubated for 12 h, then stained with PI and AnV. (D) Percentage of viable (left panel),

73 apoptotic (middle panel), or necrotic (right panel) cells from the data described in (C) was

74 calculated. Data are presented as mean ± s.e.m. , n = 3 per group.

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