

# GCN5 modulates osteogenic differentiation of periodontal ligament stem cells through DKK1 acetylation in inflammatory microenvironment

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# Supplementary Table S1

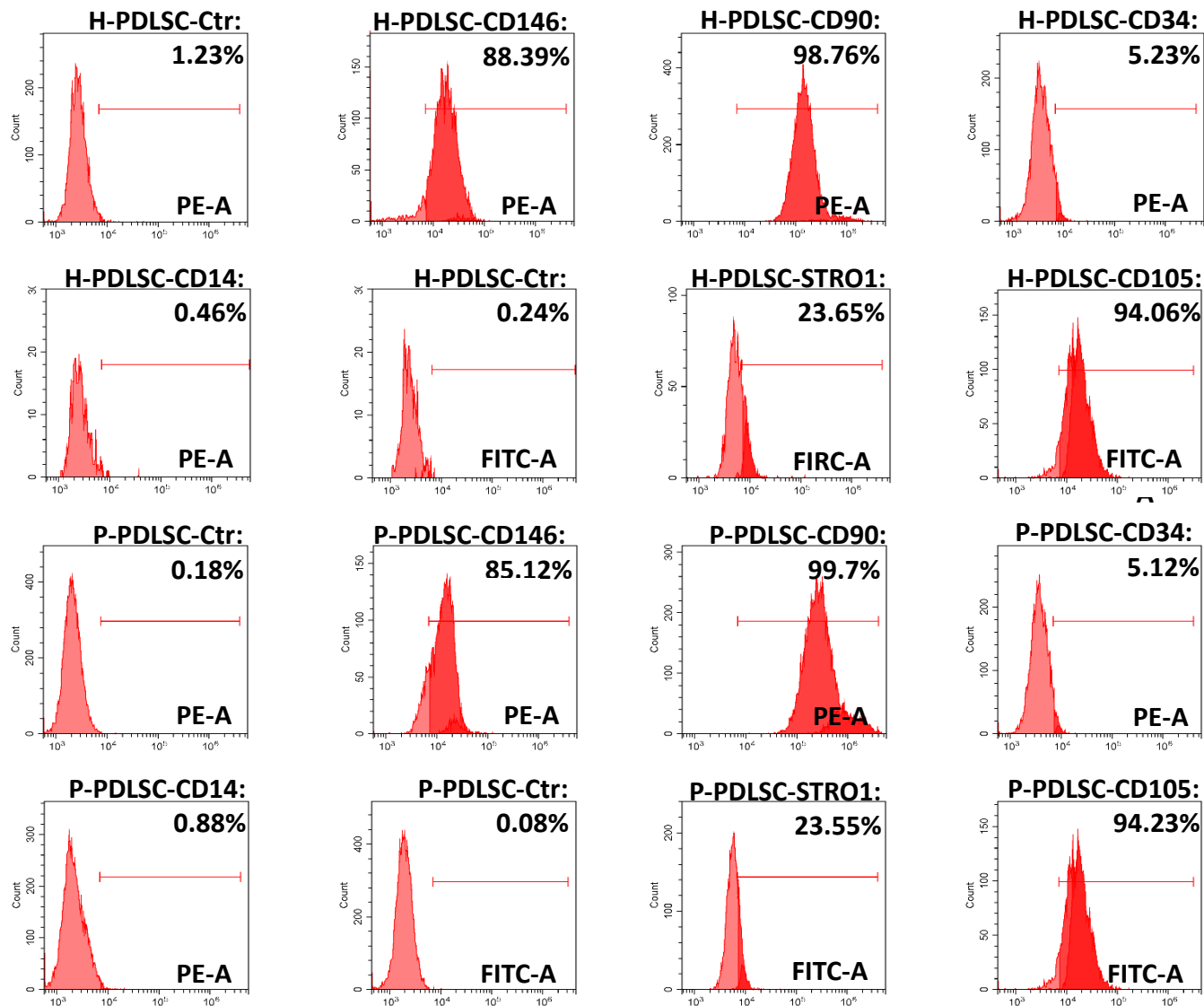
## Primer sequence used for polymerase chain reaction amplifications.

| Gene    | Primer sequences |                                |
|---------|------------------|--------------------------------|
| h-GCN5  | Forward          | 5'-CCAAATCAAGTCTCACCCCAGT-3'   |
|         | Reverse          | 5'-GGAAGCGGATGACCTCGTAG-3'     |
| h-Runx2 | Forward          | 5'-CCCGTGGCCTTCAAGGT-3'        |
|         | Reverse          | 5'-ATGACAGTACCGCCCATTGC-3'     |
| h-ALP   | Forward          | 5'-GGACCATTCCCACGTCTTCAC-3'    |
|         | Reverse          | 5'-ATGACAGTACCGCCCATTGC-3'     |
| h-SP7   | Forward          | 5'-GCCAGAAGCTGTGAAACCTC-3'     |
|         | Reverse          | 5'-GCTGCAAGCTCTCCATAACC-3'     |
| h-WNT1  | Forward          | 5'-CGGGCAACAACCAAAGTCG-3'      |
|         | Reverse          | 5'-CGTTCACAATACCCCACCAT-3'     |
| h-WNT2  | Forward          | 5'-ACAGCAGGCCGTGTGTGTGCAA-3'   |
|         | Reverse          | 5'-AGGCAGTCCTGACAGCGCAC-3'     |
| h-WNT2B | Forward          | 5'-GACCGGGACCACACCGTCTTTGG-3'  |
|         | Reverse          | 5'-GGTGGAGGGTGGAGGAAGGTG-3'    |
| h-WNT3A | Forward          | 5'-CTCGGATACTTCTTACTCCTCTGC-3' |
|         | Reverse          | 5'-CCTGGATGCCAATCTTGATG-3'     |

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|                |         |                                 |
|----------------|---------|---------------------------------|
| h-WNT8A        | Forward | 5'-GATGCCAGAGCCCTGATGAA-3'      |
|                | Reverse | 5'-GCCTGGTCATACTTGGCCTT-3'      |
| h-WNT10A       | Forward | 5'-TTCTTCCTACTGCTGCTGGC-3'      |
|                | Reverse | 5'-TTAGGCACACTGTGTTGGCA-3'      |
| h-WNT10B       | Forward | 5'-CAACACCGTGTGCTTGACG-3'       |
|                | Reverse | 5'-CAGCCAGCATGGAGAAGGAA-3'      |
| h-DKK1         | Forward | 5'-GGGAATTACTGCAAAAATGGAATA-3'  |
|                | Reverse | 5'-ATGACCGGAGACAAACCAGAAC-3'    |
| h-Sclerostin   | Forward | 5'-AGCTGGAGAACAACAAGACCA-3'     |
|                | Reverse | 5'-CATCGGTCACGTAGCGGG-3'        |
| h-Sfrp1        | Forward | 5'-GATGCAGGAGGCTCAGGTGAT-3'     |
|                | Reverse | 5'-GCTGGCAACAGGTCAGAACG-3'      |
| r-GCN5         | Forward | 5'-TCGTCTTCTGTGCTGTCACC-3'      |
|                | Reverse | 5'-TCGGCGTAGGTGAGGAAGTA-3'      |
| r-TNF $\alpha$ | Forward | 5'-GACCCTCACACTCAGATCATCTTCT-3' |
|                | Reverse | 5'-TGCTACGACGTGGGCTACG-3'       |
| r-IL-1 $\beta$ | Forward | 5'-TGGCAACTGTCCCTGAACTC-3'      |
|                | Reverse | 5'-GTCGAGATGCTGCTGTGAGA-3'      |
| GAPDH          | Forward | 5'-CTGCAAGAACAGCATTGCAT-3'      |
|                | Reverse | 5'-GACCACCTGGTCCTCAGTGT-3'      |

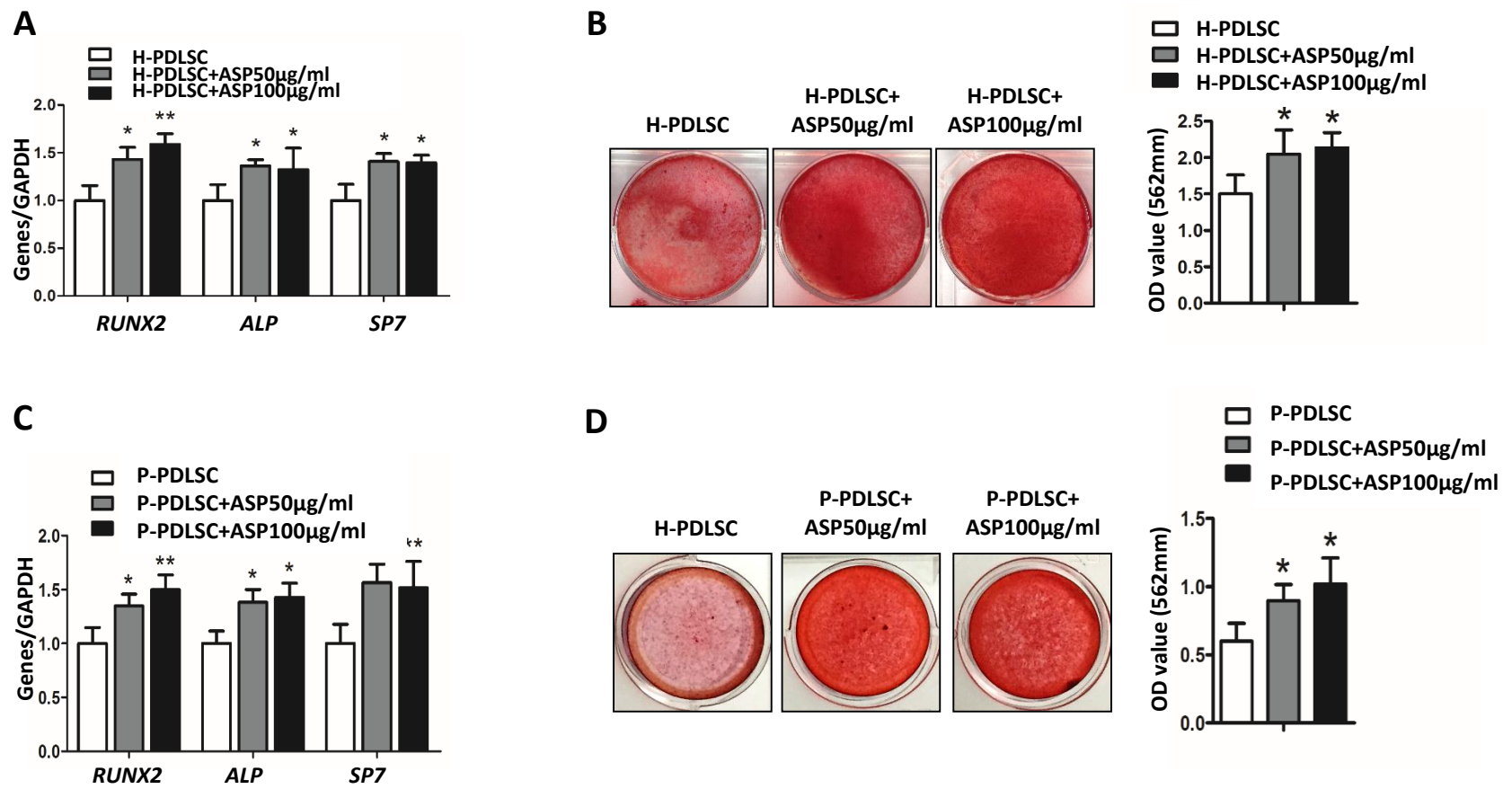
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**Fig. S1**

## Supplementary Figure 1: Immunophenotype of PDLSCs.

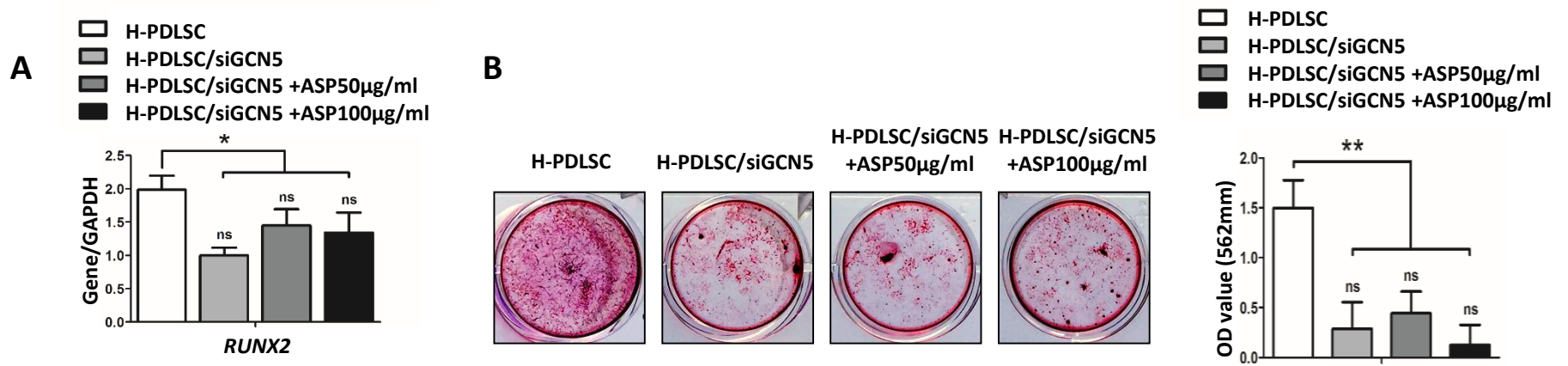
Immunophenotype analysis of H-PDLSCs and P-PDLSCs from each group was determined by Flow cytometry assay.



**Fig. S2**

**Supplementary Figure 2: Aspirin promotes osteogenic differentiation of P-PDLSCs.**

(A) Gene expression of Runx2, ALP and SP7 in H-PDLSCs and H-PDLSCs with aspirin treatment (50 and 100µg/ml) was measured by qRT-PCR after osteogenic induction for 14 days. (B) H-PDLSCs with or without aspirin treatment were cultured in osteogenic medium and osteogenic differentiation was determined by Alizarin red S staining after 28 days. (C) Gene expression of Runx2, ALP and SP7 in P-PDLSCs and P-PDLSCs with aspirin treatment (50 and 100µg/ml) was measured by qRT-PCR after osteogenic induction for 14 days. (D) P-PDLSCs with or without aspirin treatment were cultured in osteogenic medium and osteogenic differentiation was determined by Alizarin red S staining after 28 days. Data represent the means  $\pm$  SD. \* $p < 0.05$ , \*\*  $p < 0.01$ , (n = 3).



**Fig. S3**

**Supplementary Figure 3: Aspirin fails to increase osteogenic differentiation after knockdown GCN5.**

(A) Gene expression of Runx2 in H-PDLSCs, H-PDLSCs/siGCN5 and H-PDLSCs/siGCN5 with aspirin treatment (50 and 100µg/ml) was measured by qRT-PCR after osteogenic induction for 14 days. (B) H-PDLSCs, H-PDLSCs/siGCN5 and H-PDLSCs/siGCN5 with aspirin treatment (50 and 100µg/ml) were cultured in osteogenic medium and osteogenic differentiation was determined by Alizarin red S staining after 28 days. Data represent the means  $\pm$  SD. \* $p < 0.05$ , \*\*  $p < 0.01$ , (n = 3).