

1 **Fig. S1** Changes of serum 25(OH)D, calcium (Ca) and phosphorus (P) levels in Balb/c mice after 11
2 weeks of administration with TP 2235 vitamin D free diet compared to fed with normal rodent diet. (A)
3 Serum 25(OH)D level of female and male mice, (B) serum Ca level of female and male mice, and (C)
4 serum P level of female and male mice.

5 **Fig. S2** Serum 25 (OH) D level changes of VD-deficient mice after 3 weeks of oral administration with
6 PPs-VD₃ or and VD₃ standard.

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