Supplementary Materials

Effects of hydrogen sulfide on carbohydrate metabolism in obese type 2 diabetic rats

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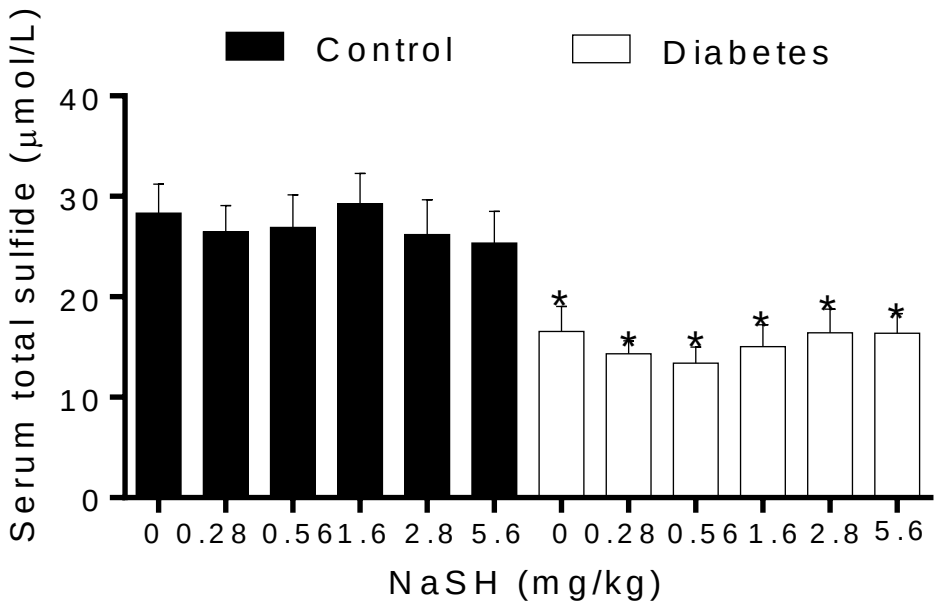

Figure S1. Serum total sulfide levels before NaSH administration. *Significantly different compared to non-treated control group ($P<0.05$). Values are mean ± SEM (n=10).

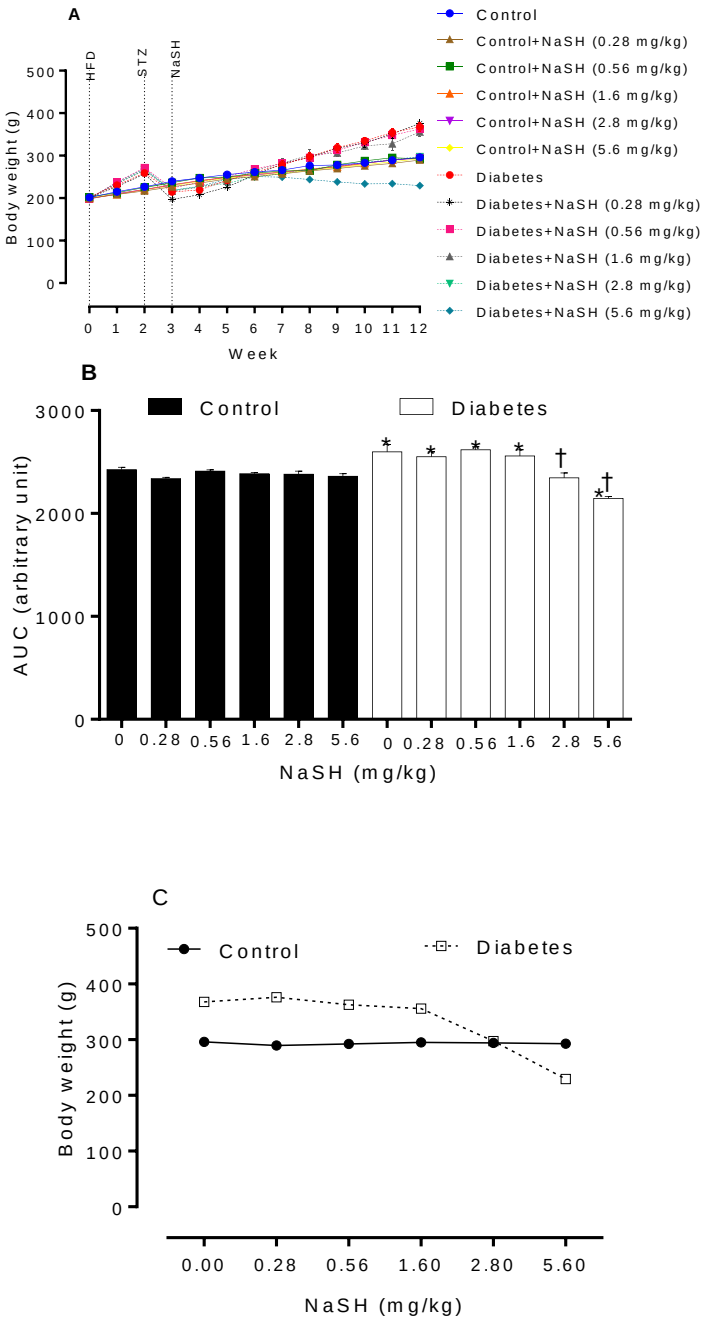

Figure S2. Effects of NaSH on body weight (A). Area under the curves (from week 3 to week 12) are shown in B and the relation between dose of NaSH and effect is shown in C. * Statistically significant difference compared to untreated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

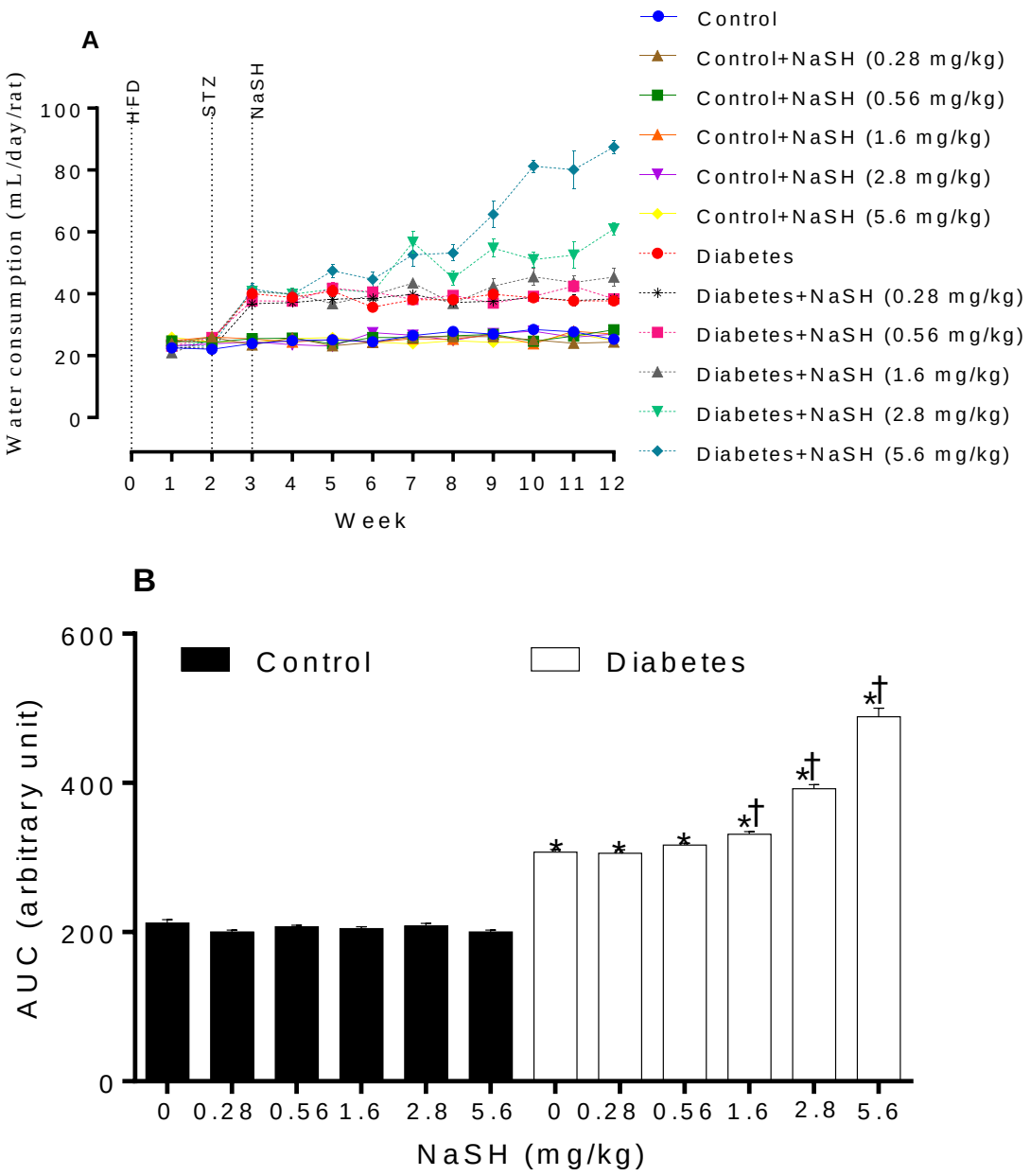

Figure S3. Effects of NaSH on water consumption (A). Area under the curves (from week 3 to week 12) are shown in B. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

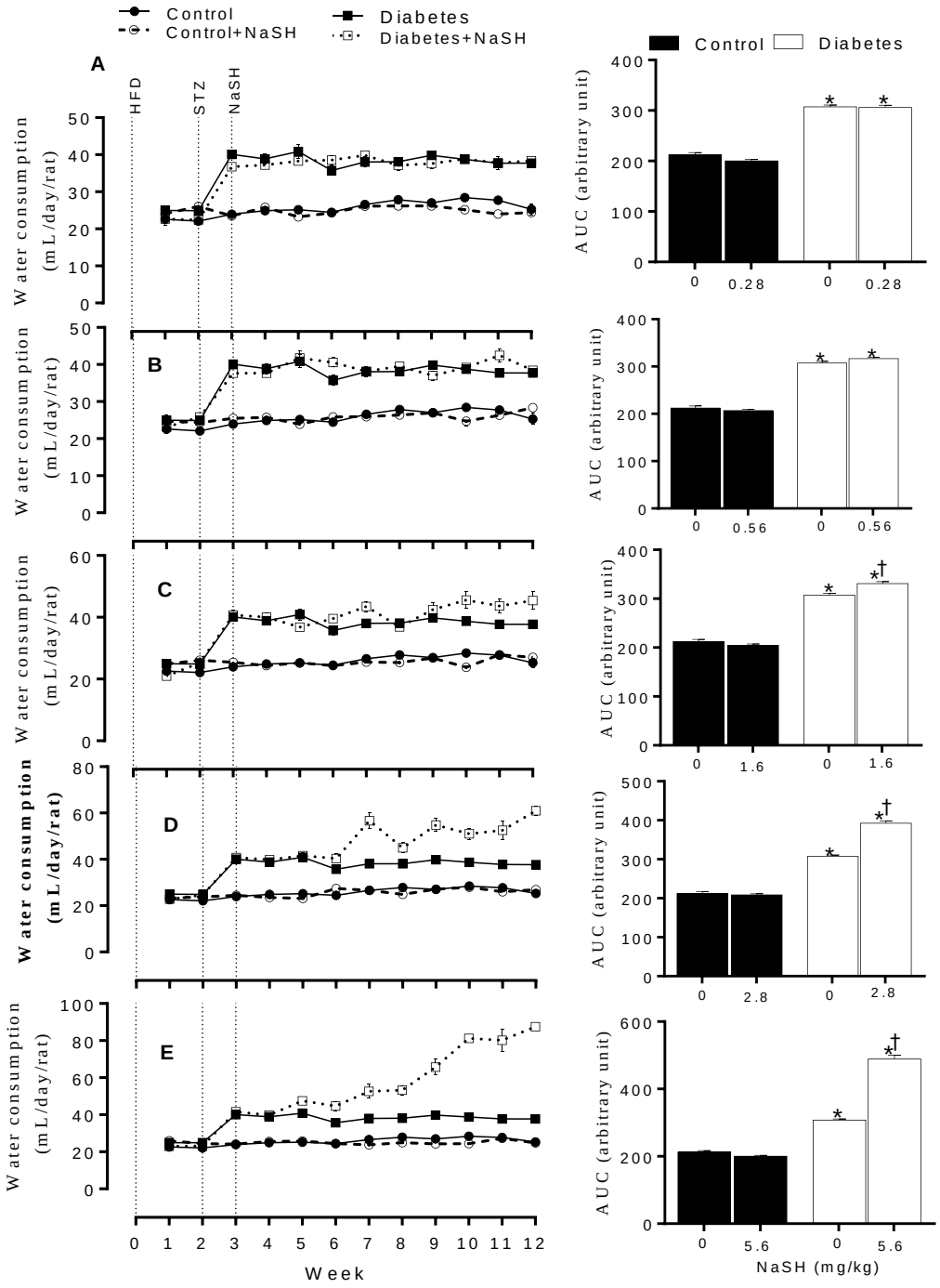

Figure S4. Effects of NaSH on water consumption at 0.28 (A), 0.56 (B), 1.6 (C), 2.8 (D), and 5.6 (E) mg/kg. Area under the curves (from week 3 to week 12) are shown in columns on the right. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

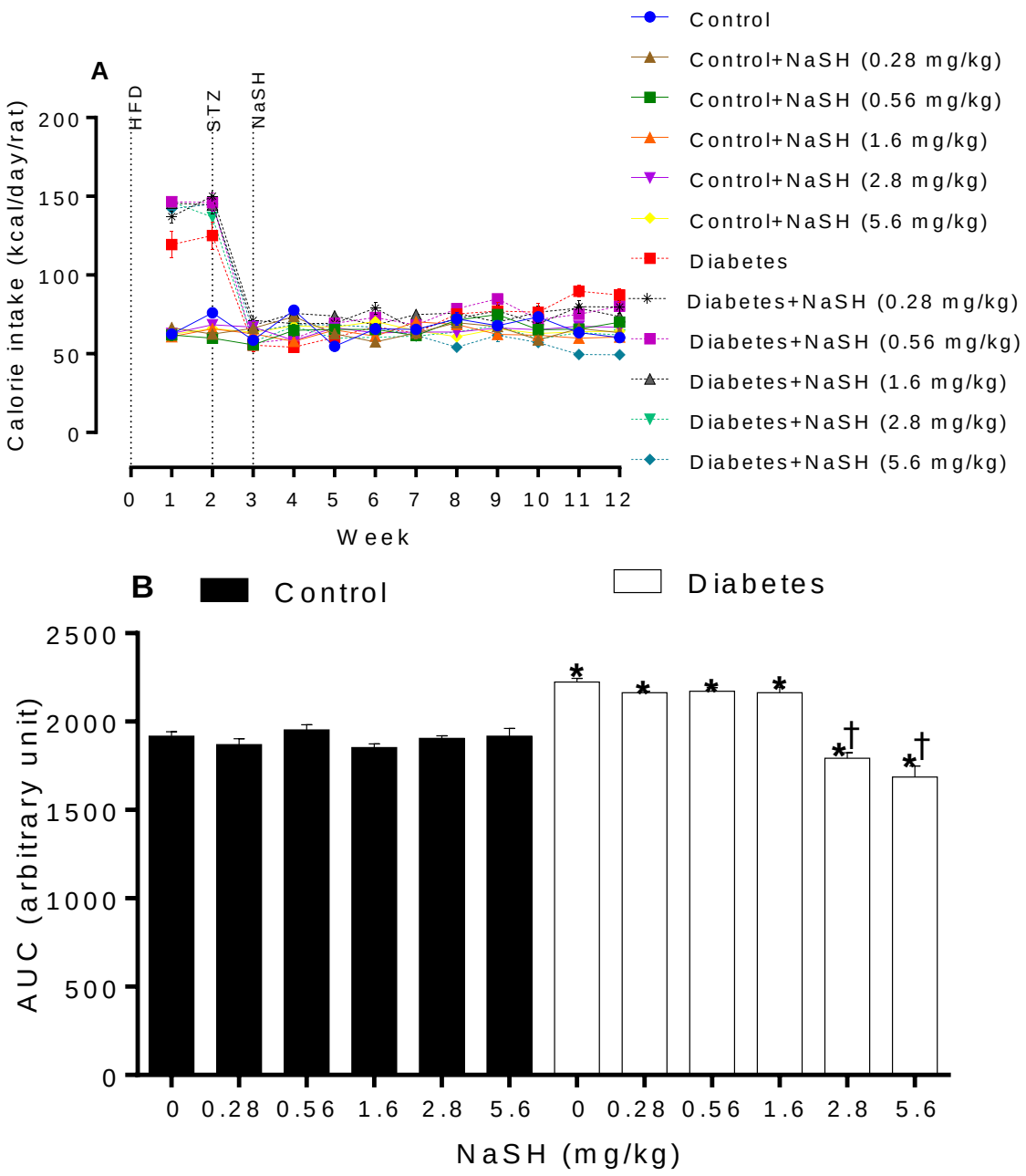

Figure S5. Effects of NaSH on calorie intake (A). Area under the curves (from week 3 to week 12) are shown in B. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

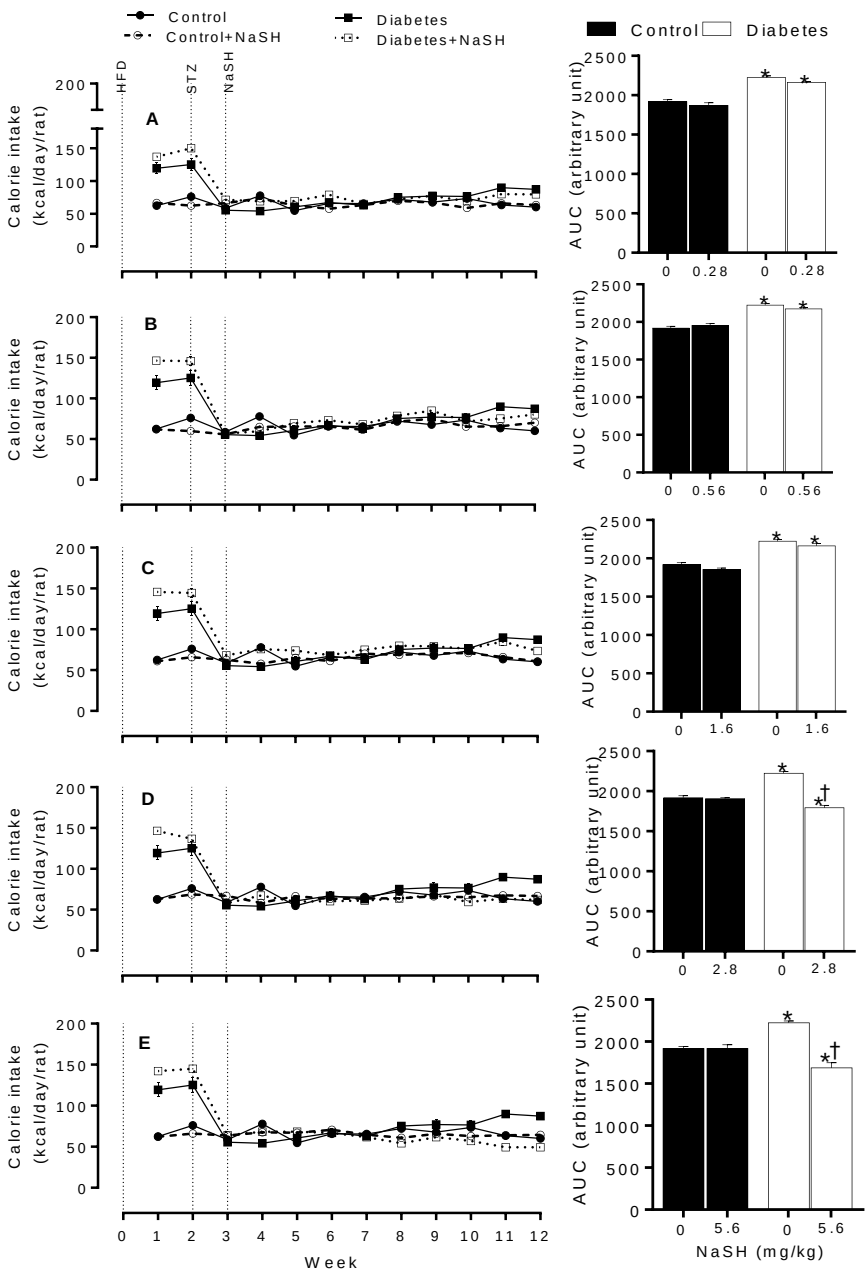

Figure S6. Effects of NaSH on calorie intake at 0.28 (A), 0.56 (B), 1.6 (C), 2.8 (D), and 5.6 (E) mg/kg. Area under the curves (from week 3 to week 12) are shown in columns on the right. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

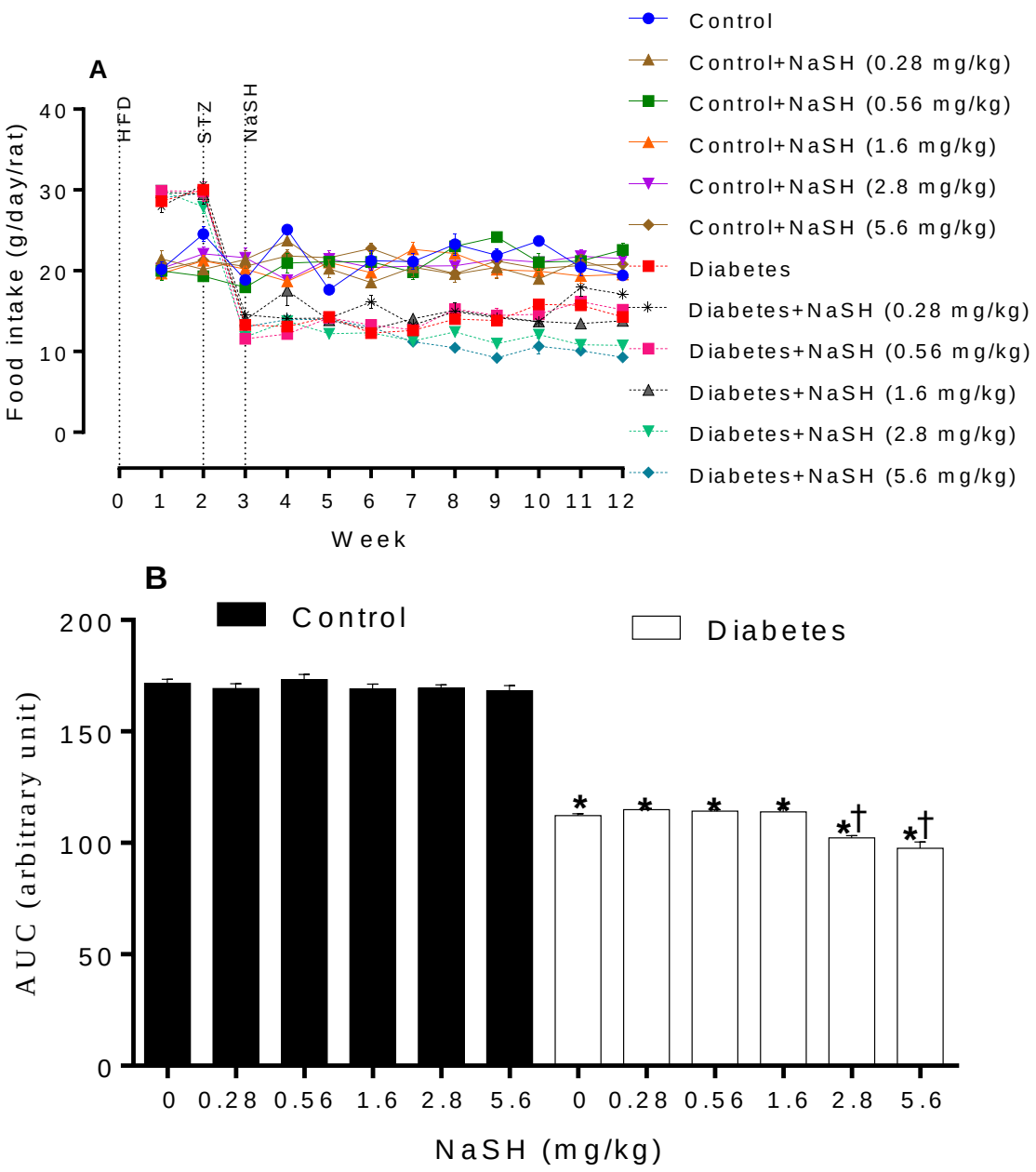

Figure S7. Effects of NaSH on food intake (A). Area under the curves (from week 3 to week 12) are shown in B. * statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

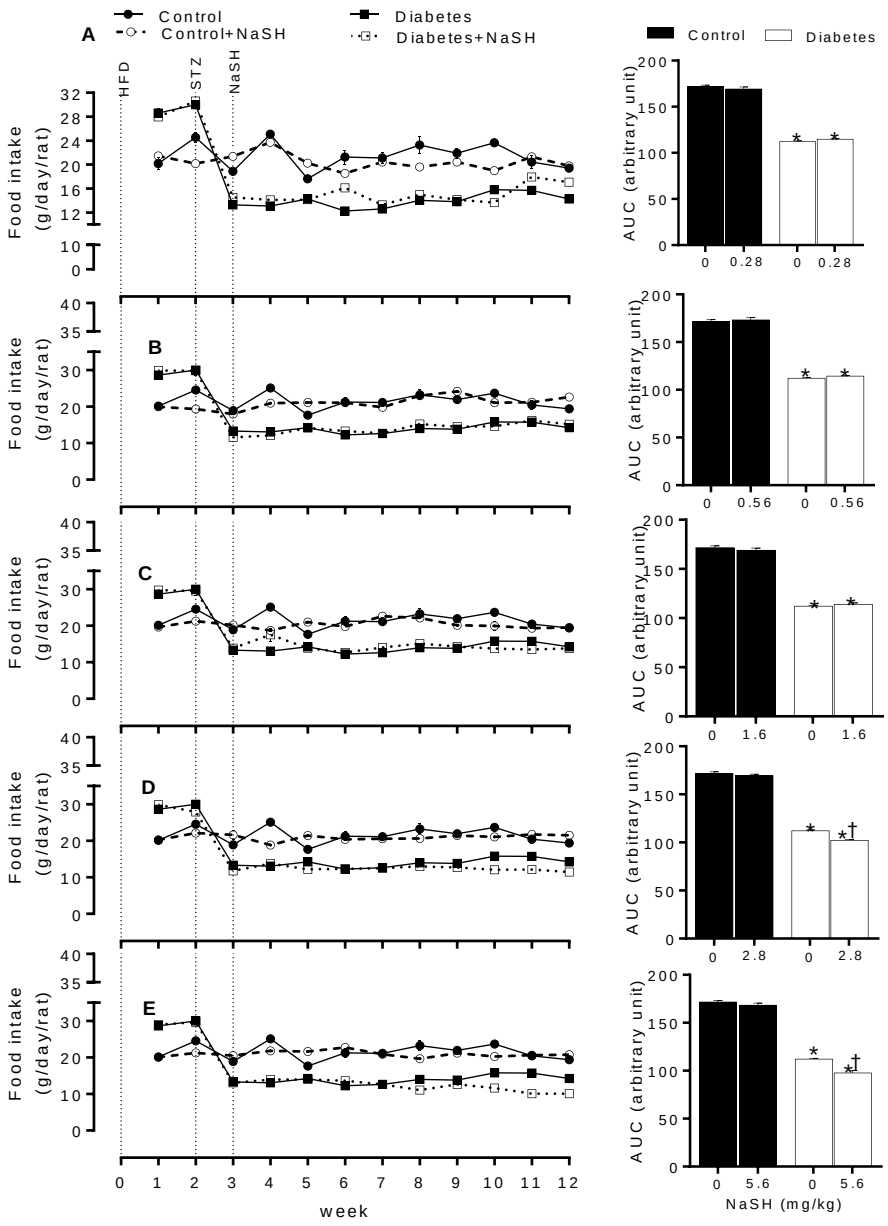

Figure S8. Effects of NaSH on food intake at 0.28 (A), 0.56 (B), 1.6 (C), 2.8 (D), and 5.6 (E) mg/kg. Area under the curves (from week 3 to week 12) are shown in columns on the right. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

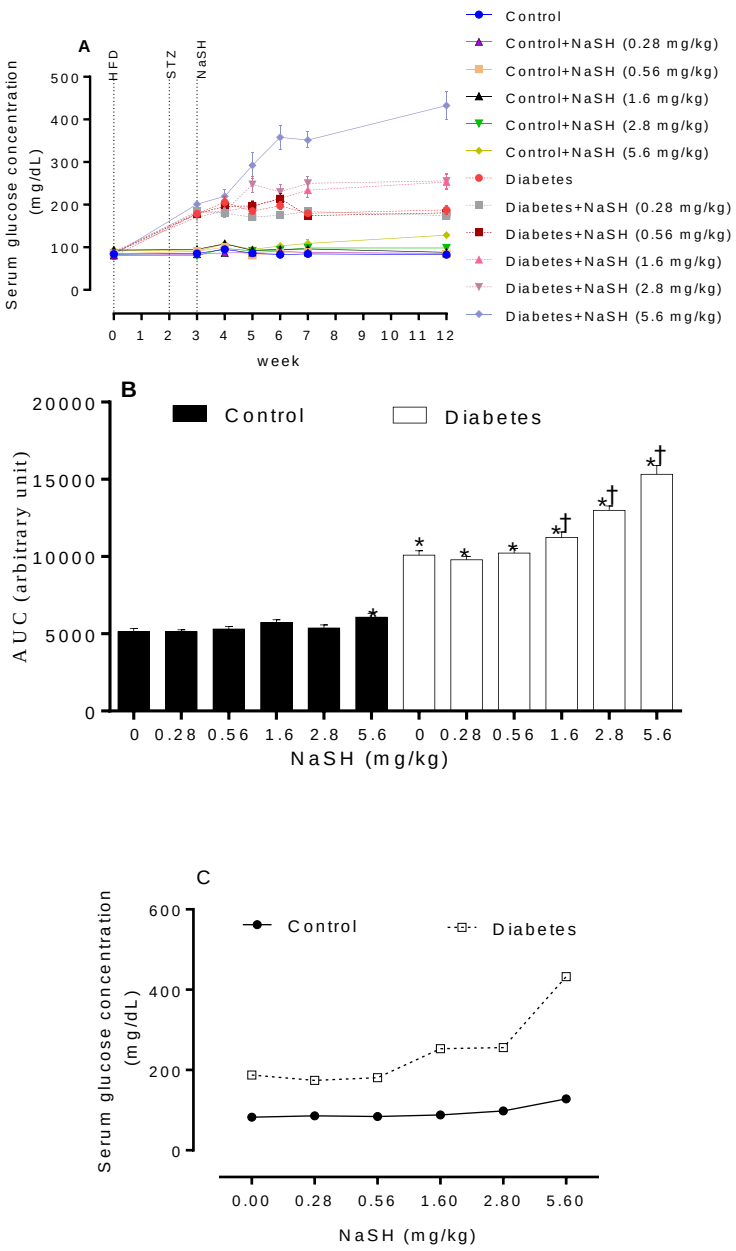

Figure S9. Effects of NaSH on serum glucose (A). Area under the curves (from week 3 to week 12) are shown in B and the relation between dose of NaSH and effect is shown in C. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10). HFD, start of high fat diet; STZ, STZ injection; NaSH, start of NaSH injection.

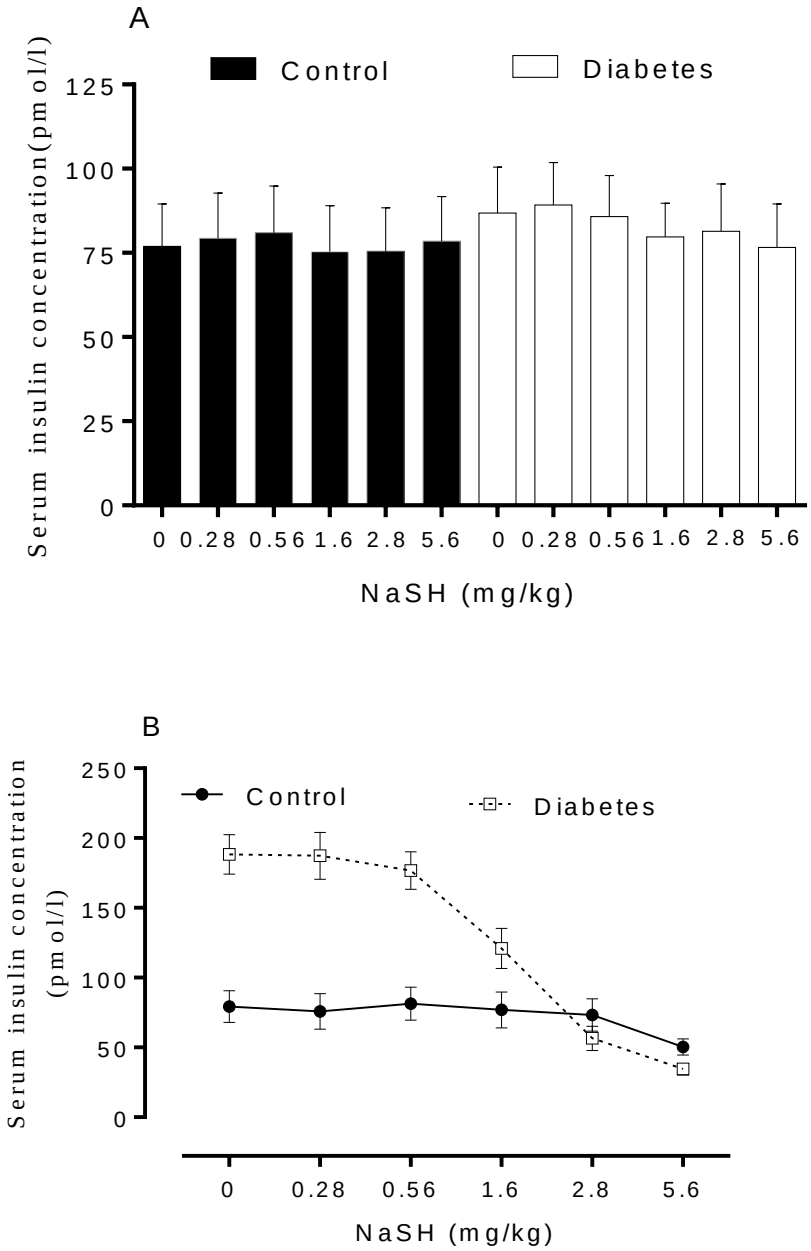

Figure S10. Serum insulin levels before NaSH administration (A). The relation between dose of NaSH and effect is shown in B. Values are mean ± SEM. (n=8).

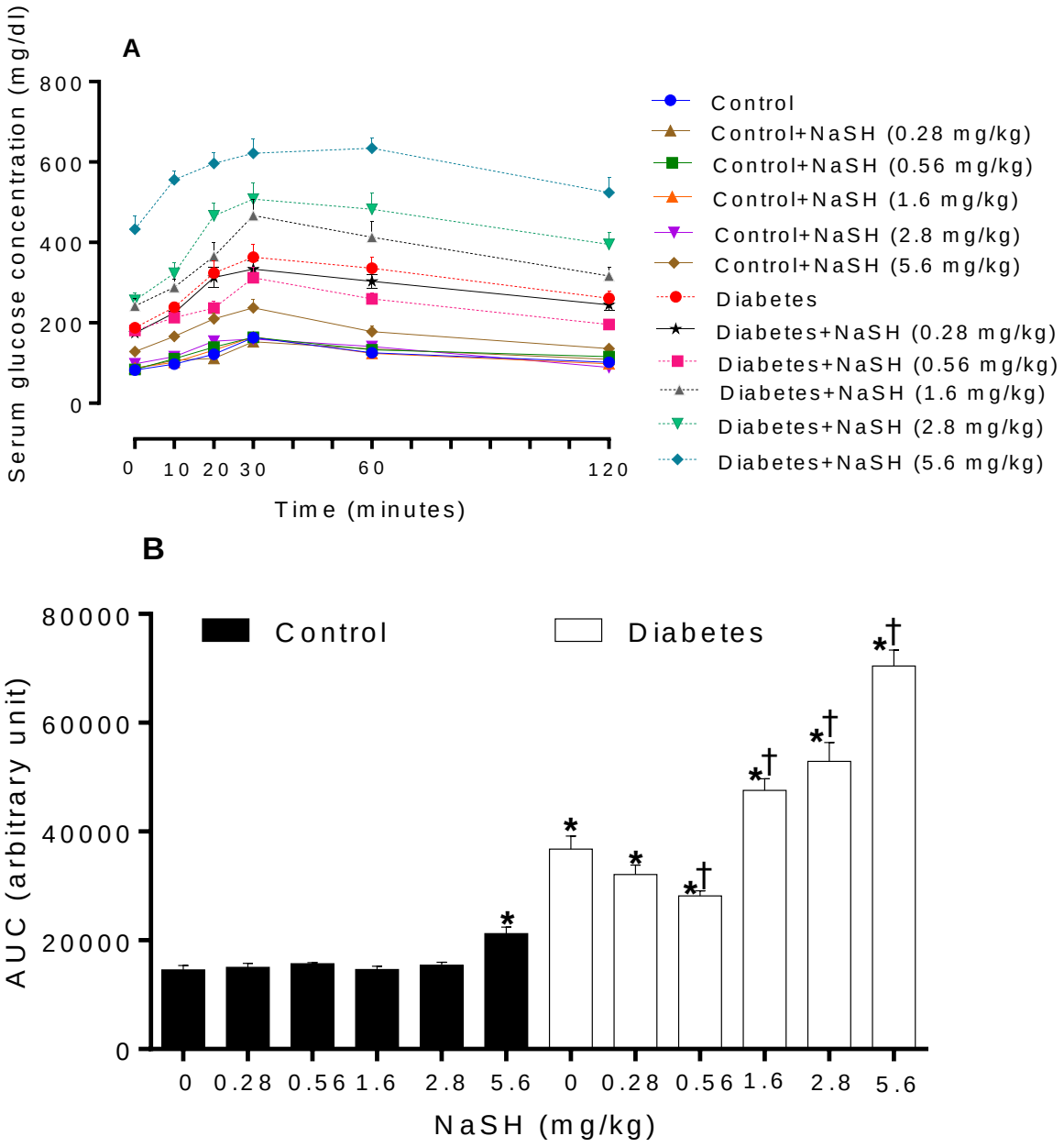

Figure S11. Effects of NaSH on glucose tolerance (A). Area under the curves are shown in B. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10).

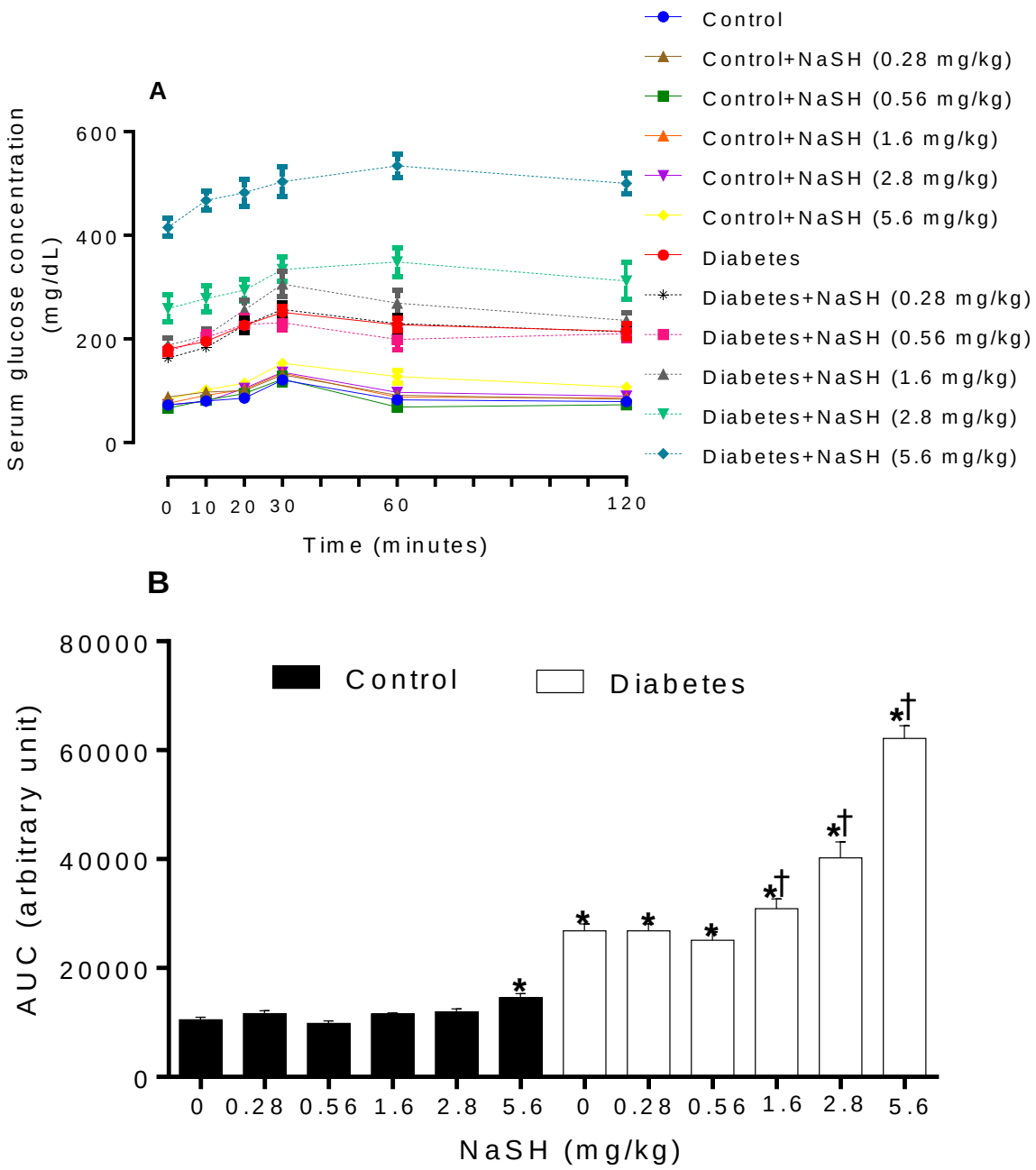

Figure S12. Effects of NaSH on pyruvate tolerance (A). Area under the curves are shown in B. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=10).

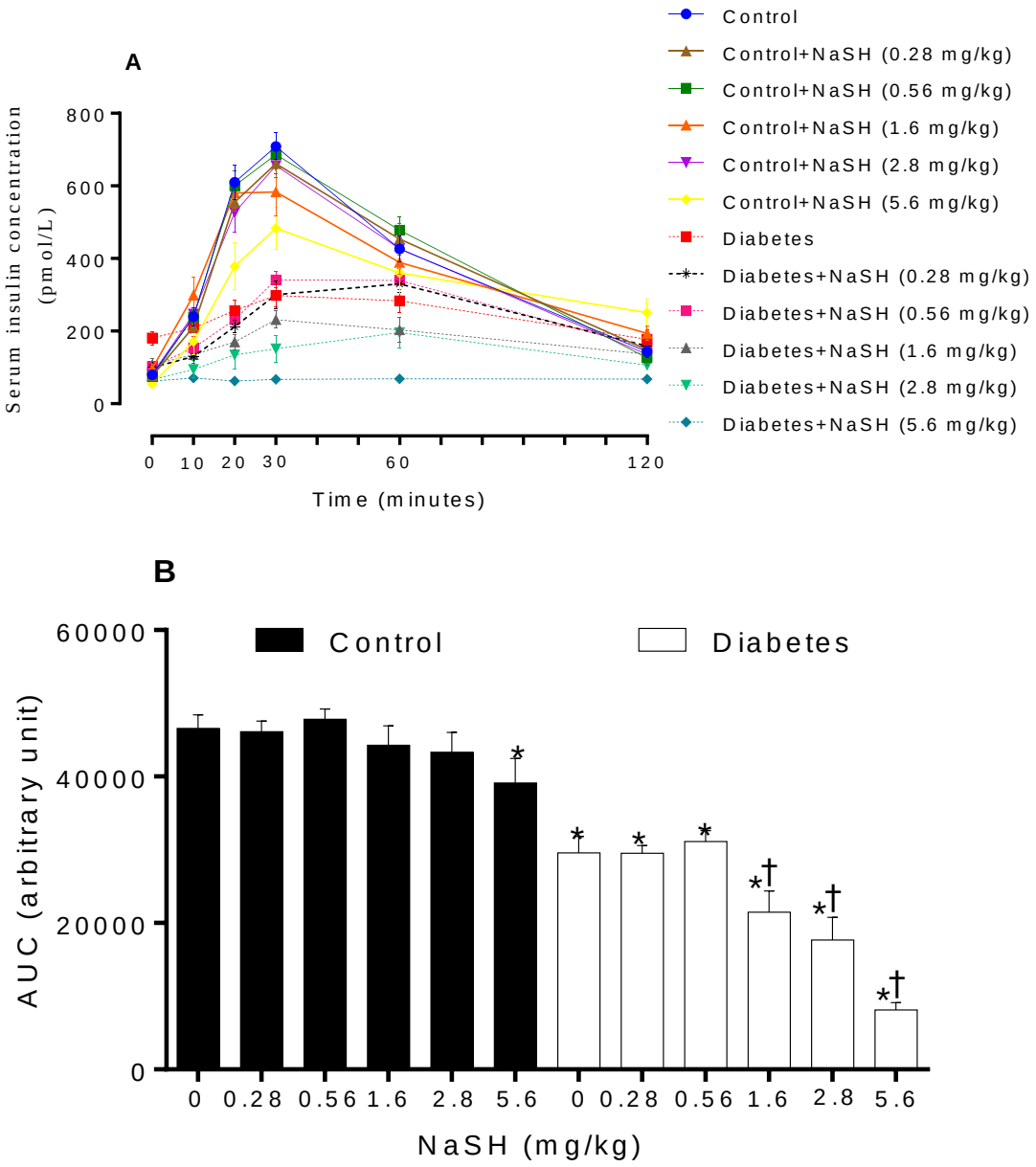

Figure S13. Effects of NaSH on *in vivo* insulin secretion (A). Area under the curves are shown in B. * Statistically significant difference compared to un-treated control group. † Statistically significant difference compared to un-treated diabetic group. Values are mean ± SEM. (n=8).