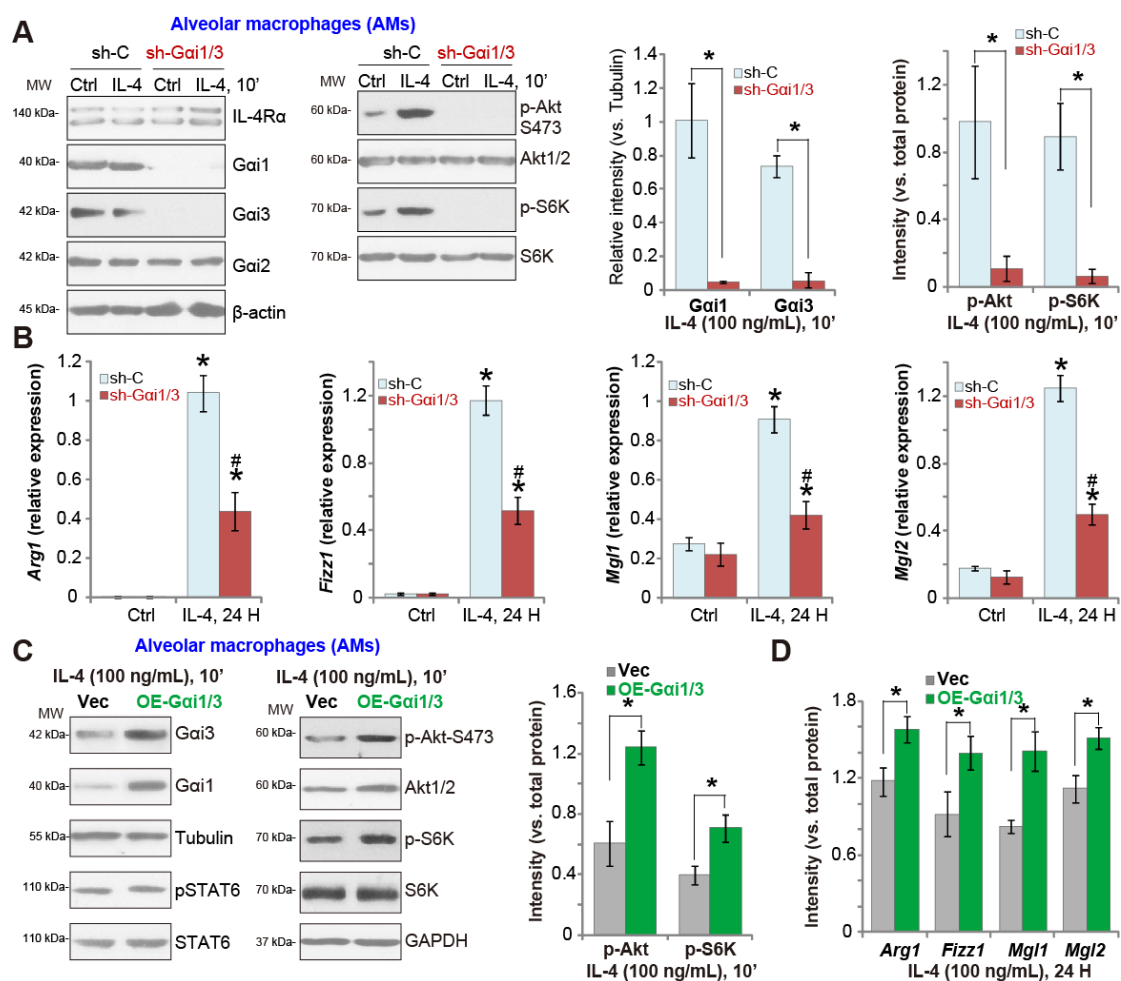


**Figure S1.** Wild-type (WT), *Gai1* and *Gai3* double knockout (DKO) (A-B and I), *Gai1*, *Gai2* or *Gai3* single knockout (SKO) (C and D) mouse embryonic fibroblasts (MEFs) were treated with IL-4 (100 ng/mL) for applied time, tested by Western blotting of listed proteins (A-D, I); DKO MEFs were transiently transfected with the adenovirus *Gai1* construct (“Ad-*Gai1*”), the adenovirus *Gai3* construct (“Ad-*Gai3*”) or the empty vector (“Vec”), IL-4-induced signaling was tested similarly (E). Stable WT MEFs with the scramble control shRNA (“C-shRNA”), *Gai1* shRNA and *Gai3* shRNA (“*Gai1/3*-shRNA”), were treated with IL-4 (100 ng/mL) for applied time, and were tested by Western blotting of listed proteins (F). WT and *Gai1/3* DKO MEFs were treated with or without IL-4 (100 ng/mL) for 5 min, expression of listed proteins in plasma membrane fractions and in total cell lysates was shown (G). WT and *Gai1/3* DKO MEFs were treated with IL-4 (100 ng/mL) for 5 min, the association between IL-4R $\alpha$ , Gab1, p-Gab1 and JAK1 was tested by co-immunoprecipitation assay (H). WT or Gab1 KO MEFs were treated with IL-4 (100 ng/mL) for applied time, tested by Western blotting of listed proteins (J). Quantification was performed from five replicate blot data (n=5, same for the blotting data in all Figures). Data were expressed as mean  $\pm$  standard deviation (SD). \* $P$ < 0.05 vs. WT MEFs (A-E). #  $P$ < 0.05 vs. “Vector” (E). \* $P$ < 0.05 (G).



**Figure S2.** Alveolar macrophages (AMs), expressing the lentiviral scramble control shRNA (“sh-C”) or the lentiviral Gai1 shRNA plus Gai3 shRNA (“sh-Gai1/3”) (A and B), the adenovirus Gai1 construct plus the adenovirus Gai3 construct (“OE-Gai1/3”) or empty vector (“Vec”) (C and D), were treated with or without IL-4 (100 ng/mL) for 10 min, and tested by Western blotting of listed proteins (A and C). Twenty-four hours after IL-4 treatment, relative expression of listed genes was shown (B and D); In each experiment, n=5 (five replicated wells/dishes). Experiments were repeated five times (five mice per group), data of all repeated experiments were pulled together to calculate mean  $\pm$ SD. \* $P$  < 0.05 (A, C and D). \* $P$  < 0.05 vs. “Ctrl” treatment in “sh-C” AMs (B). # $P$  < 0.05 vs. IL-4 treatment in “sh-C” AMs (B).