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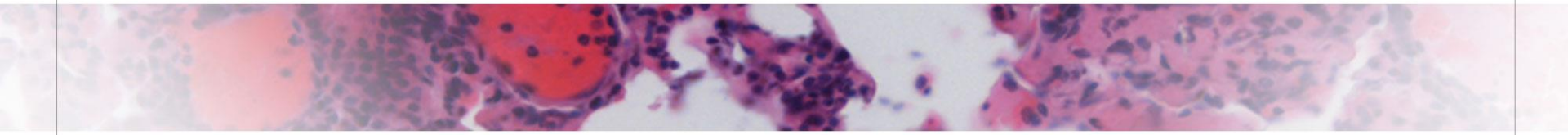


DSP107 combines CD47 Inhibition with Targeted Activation of 4-1BB to Trigger Innate and Adaptive Anticancer Immune Responses

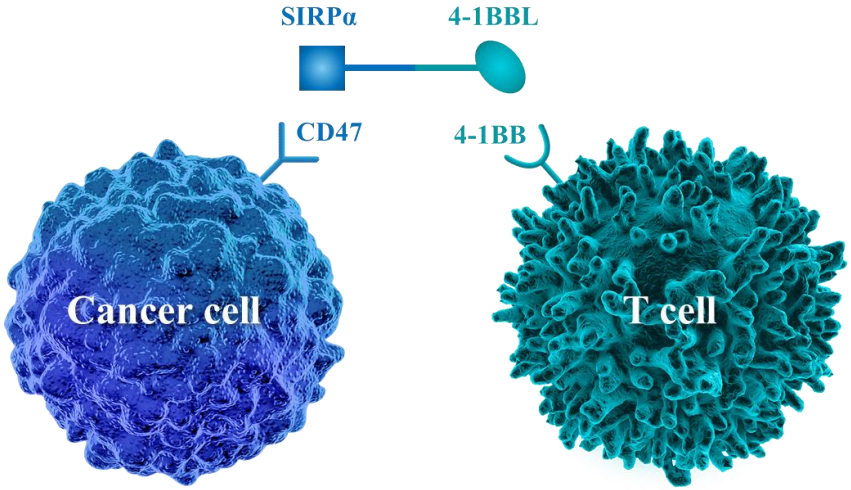
Prof. dr. Edwin Bremer

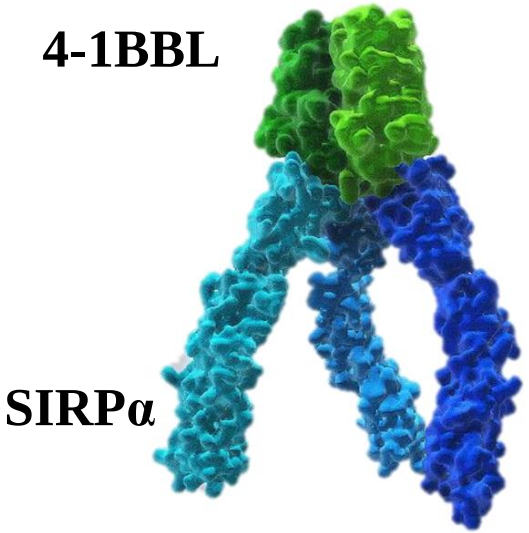
University Medical Center Groningen, Dept. of Hematology

Groningen, the Netherlands

This project has received funding from the European Union´s Horizon 2020 research and innovation programme under the Marie Sklodowska-Curie grant agreement No 813871.

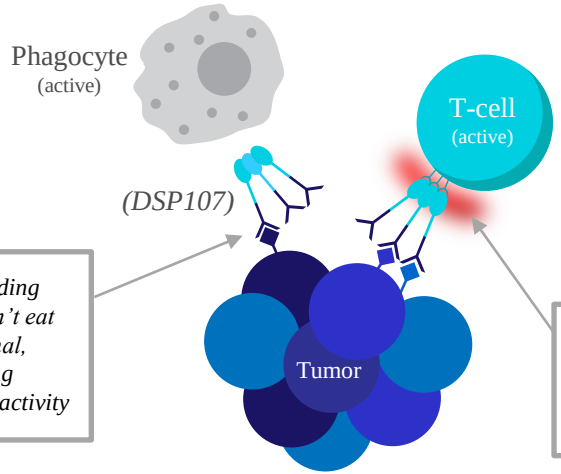
DSP107 comprises the extracellular domains of SIRPα and 4-1BBL for bifunctional activity





DSP107 – dual mode of action

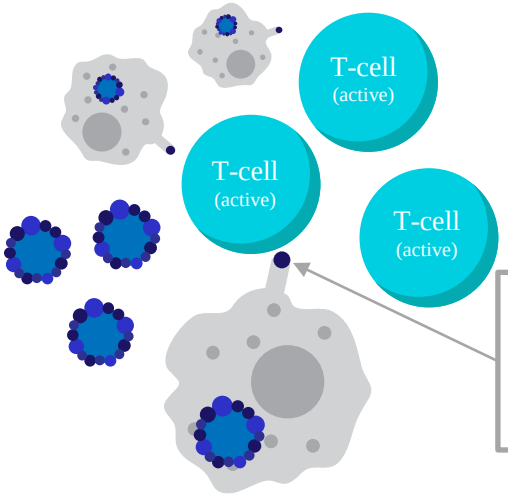
Direct innate and adaptive immunity activation



CD47 binding blocks "don't eat me" signal, enabling macrophage activity

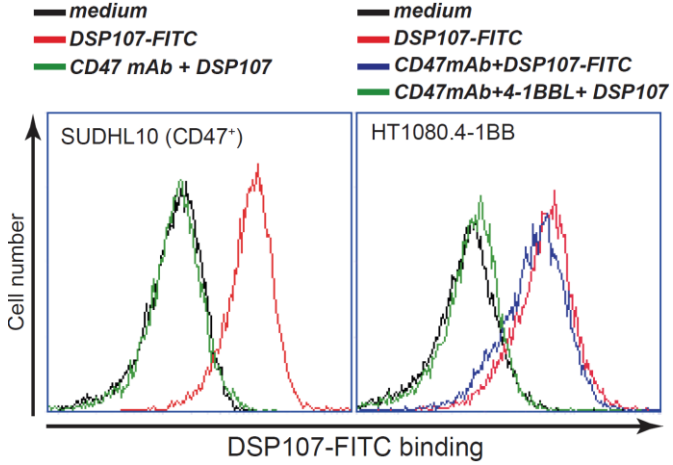
41BB mediated T-cell binding stimulates their activation

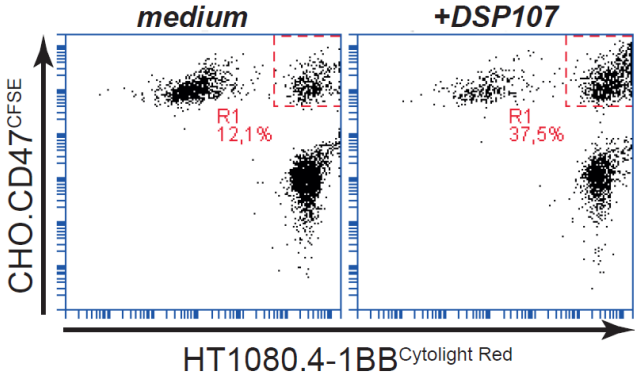
Further stimulation of adaptive immunity by increased antigen presentation

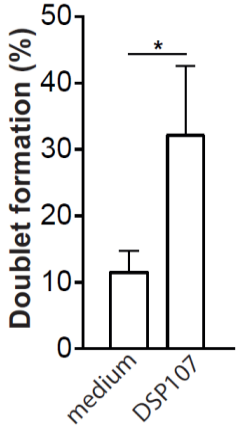


Macrophages ingest cancer cells with no "don't eat me" signal and present cancer antigens, amplifying the immune response

I. DSP107 selectively binds to CD47 and 4-1BB

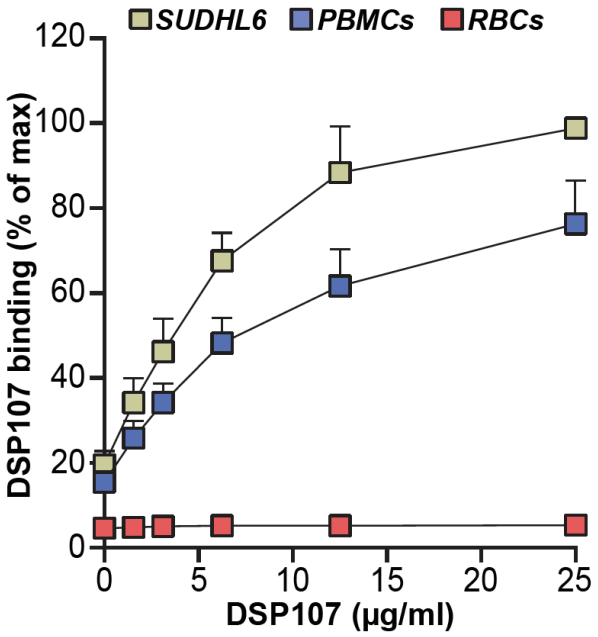


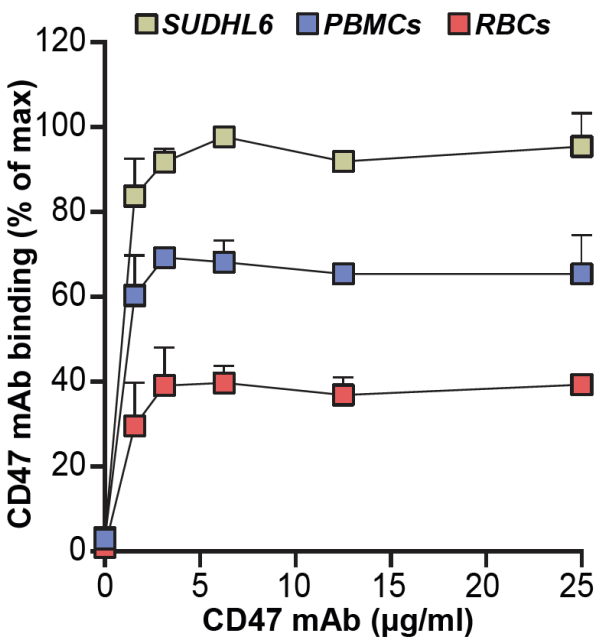




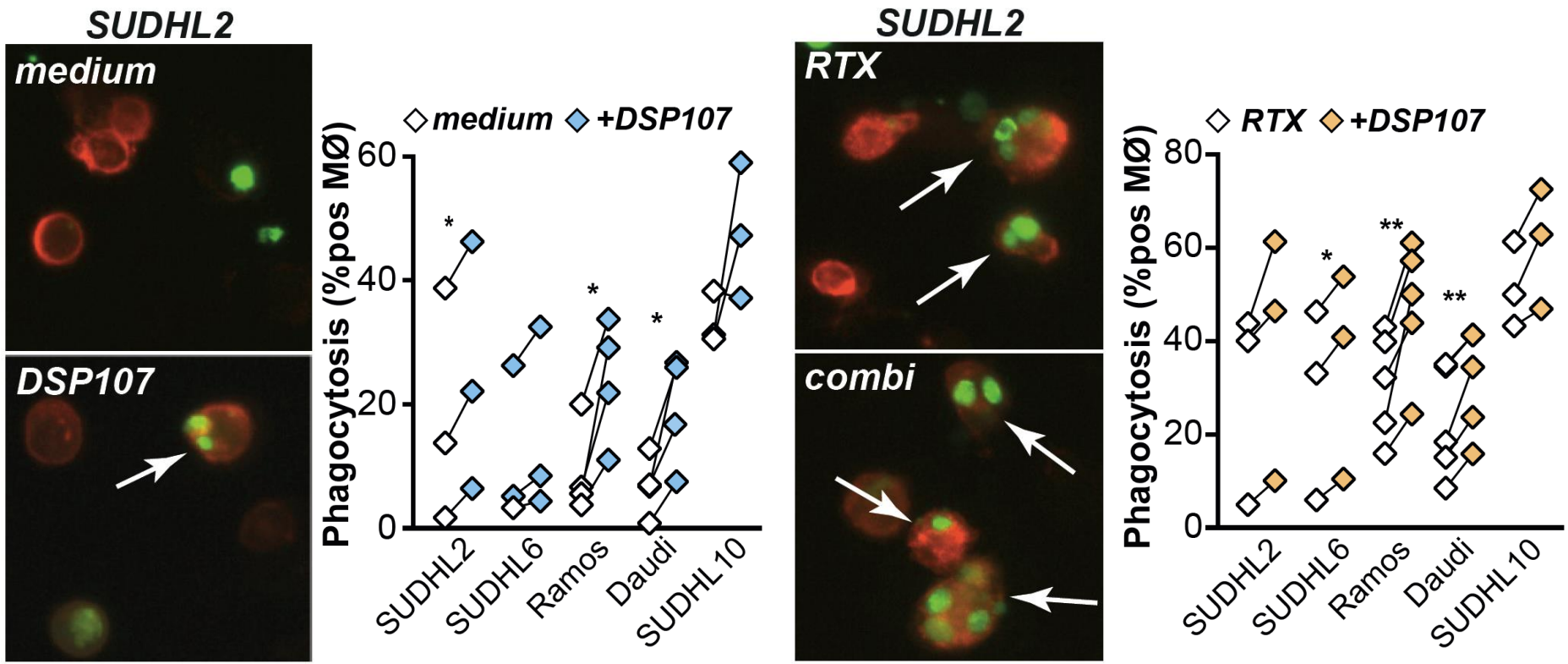
K_D(hCD47): 1.17x10^{-9}M
K_D(h4-1BB): 6.99x10^{-10}M

I. DSP107 minimally binds to RBCs (unlike CD47 mAb)





II. DSP107 triggers macrophage-mediated phagocytic removal of NHL cells



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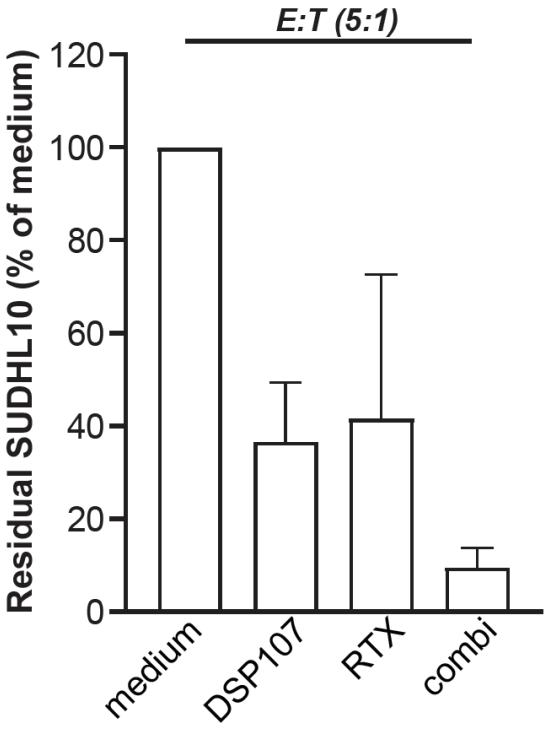
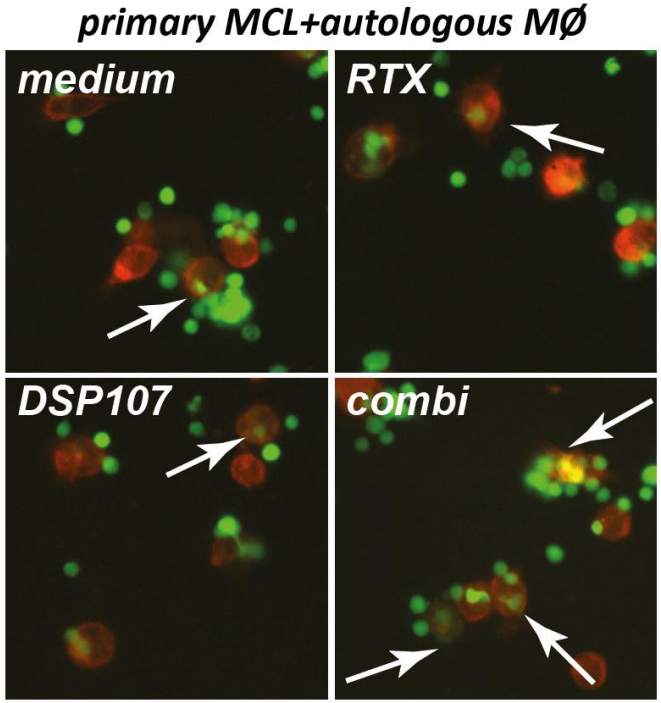
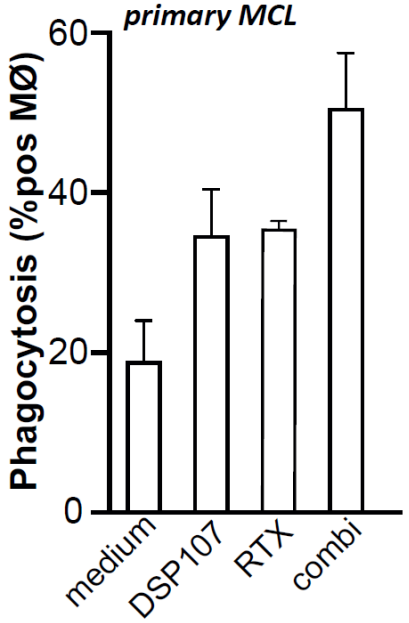
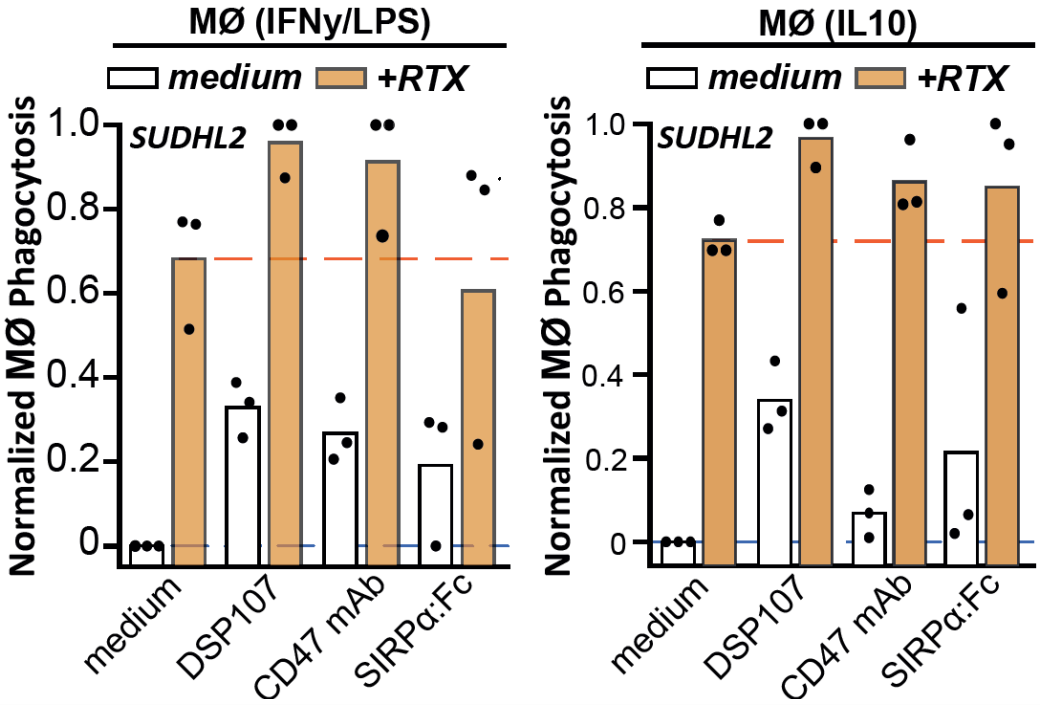


II. DSP107 checkpoint activity is also detected in an autologous setting *in vitro*

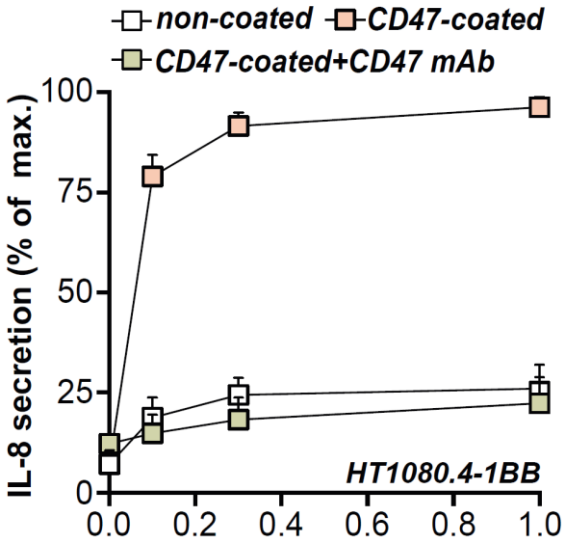


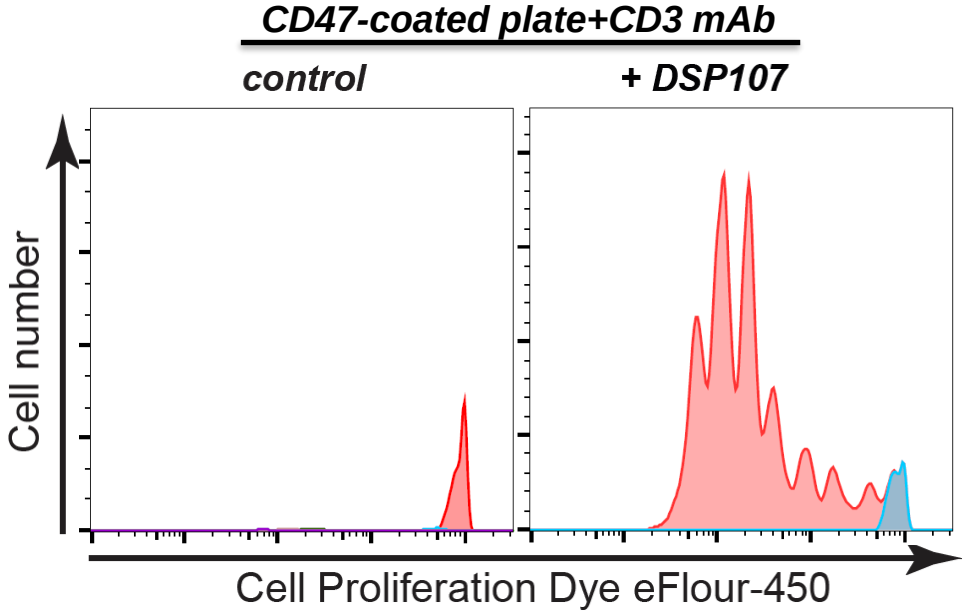


II. DSP107 checkpoint activity is at least equal to other CD47 antagonists

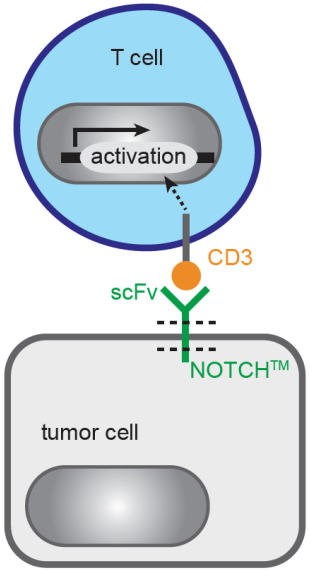


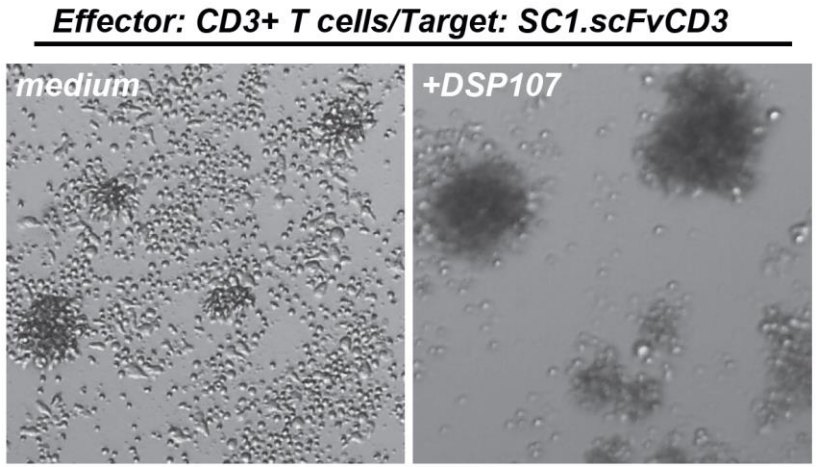
III. DSP107 triggers 4-1BB-mediated signaling only after CD47-specific binding

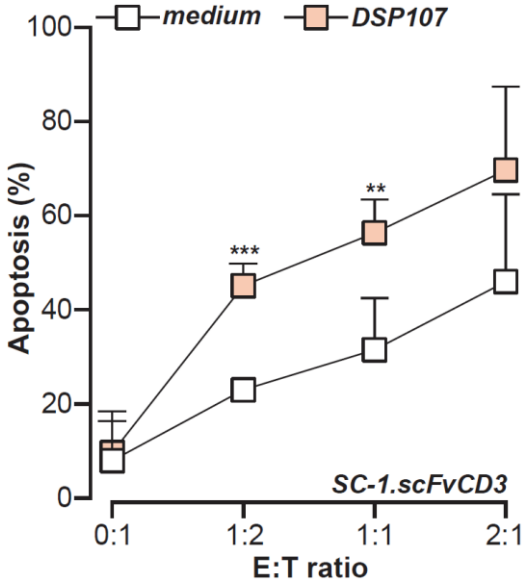




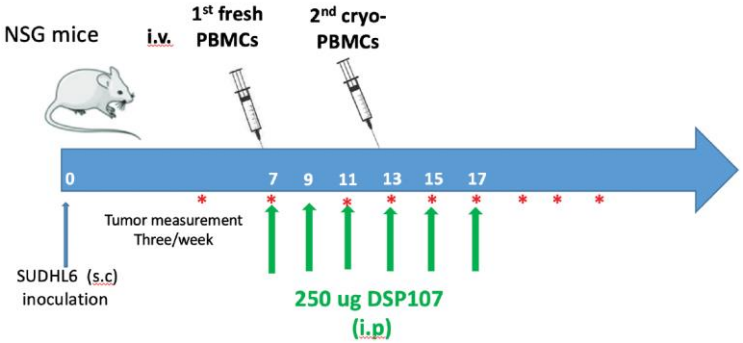
III. DSP107 augments anti-cancer T cell activity *in vitro*

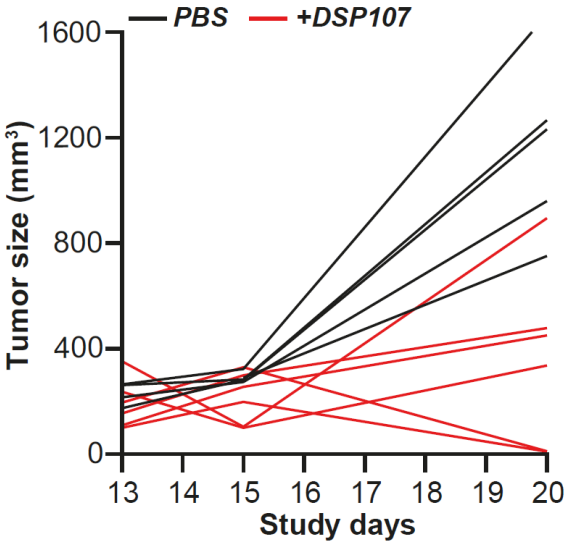


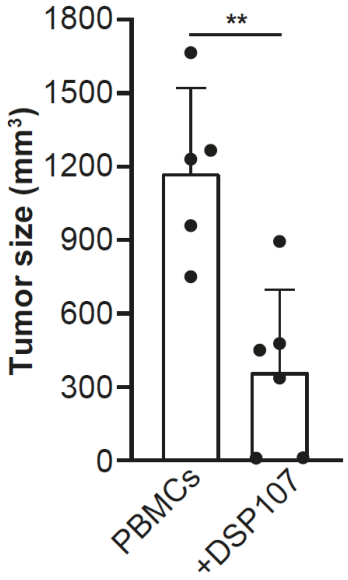




IV. DSP107 potentiates antitumor activity *in vivo*







Conclusions

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I. **DSP107 binds to both CD47 and 4-1BB**

II. **DSP107 blocks CD47 checkpoint and augments phagocytosis**

III. **DSP107 triggers 4-1BB-mediated costimulation of T cells and augment anti-cancer T cell activity**

IV. **DSP107 mediated 4-1BB activation is conditional and requires anchoring to highly expressed CD47**

V. **DSP107 is currently being tested in a phase I/II study (NCT04440735)**