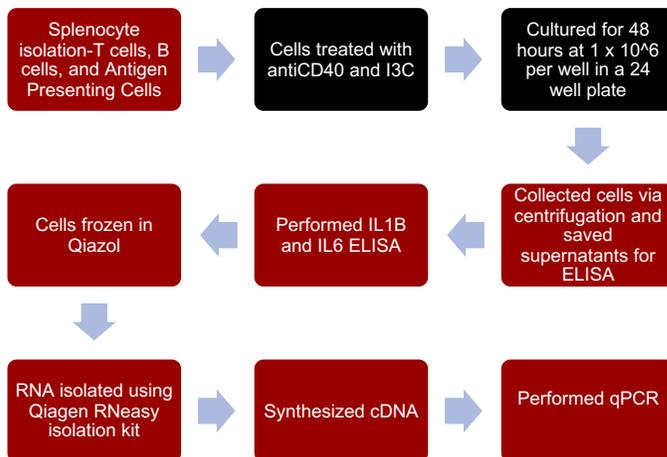


BACKGROUND

- Indole-3-carbinol (I3C) is an AhR agonist which is beneficial in regulating cytokine expression and inflammation in cells of sick patients.
- I3C provides anti-estrogenic effects that help patients that significantly use steroid hormones.
- I3C is normally found in vegetables which is why it is important to consume them to reduce inflammation and apoptic cells in the body that may cause illness.
- CD40 is a transmembrane protein that is expressed on a variation of cell types such as B cells, macrophages, and endothelial cells: it is a member of the TNF superfamily.
- CD40 is expressed by antigen-presenting cells (APC) and its natural ligand on T cells activates the APC which includes dendritic cells and B cells.
- The use of anti-CD40 agonist can promote an inflammatory response

METHODS



RESULTS

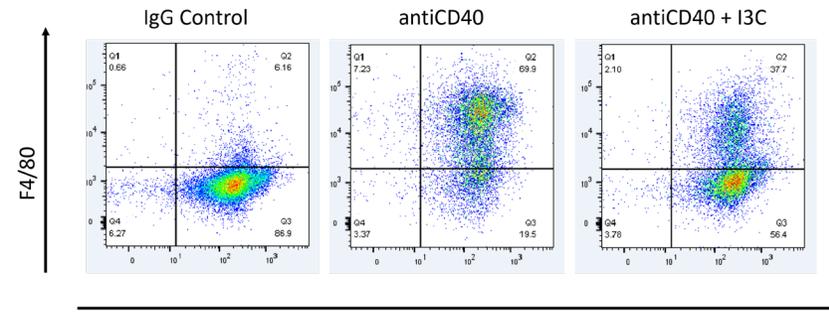


Figure 1. Flow cytometry in vivo anti-CD40 and I3C treatment lamina propria lymphocytes.

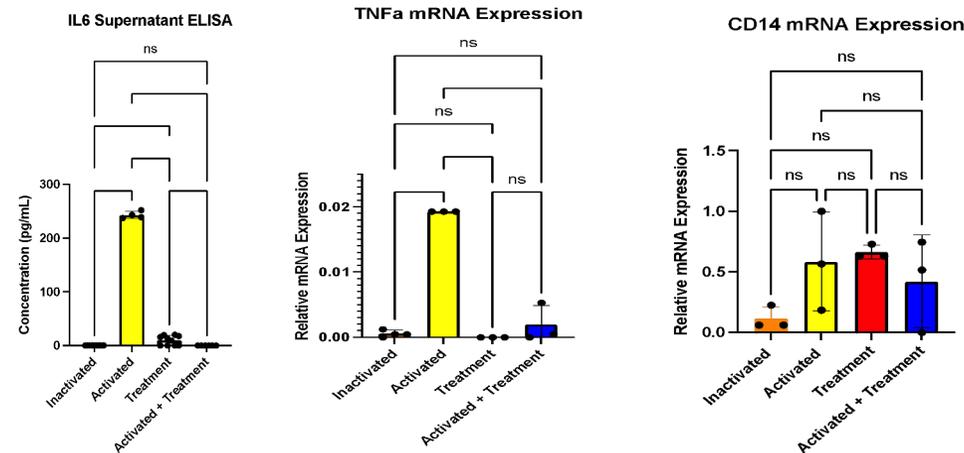


Figure 2. ELISA of cell culture supernatant.

Figure 3. qPCR of TNFa mRNA expression.

Figure 4. qPCR of CD14 mRNA expression.

CONCLUSIONS

- I3C reduces macrophage population activated by anti-CD40 in vivo.
- I3C reduces TNFa mRNA expression.
- There was no significant difference in CD14 mRNA expression in anti-CD40 and I3C treated cells.
- I3C was able to reduce IL6 expression in activated cells.
- I3C may have anti inflammatory effects on anti-CD40 activated cells.

FUTURE DIRECTIONS

- Repeat invitro experiments
- Perform invitro experiments with LPL cells
- Evaluate mRNA expression of cell markers on other immune cell types (ex: T cells)
- Evaluate the effect of I3C on other cell types

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