**Antibody Blockade of the Immunoinhibitory Receptor Siglec-10 Polarizes Tumor-associated Myeloid Cells and Promotes Anti-tumor Immunity**

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**METHODS**

- Siglec-10 expression was evaluated in human tumors by flow cytometry and RNA-seq sequencing.
- An anti-human Siglec-10 mAb that blocks ligand binding and induces receptor internalization was generated using hybridoma technology and recombinantly produced on mouse IgG1 backbone.
- To assess the in vivo activity of a Siglec-10 mAb, transgenic mice expressing human Siglec-10 were generated.
- Siglec-10 mAb activity was evaluated in vivo using a TLR-mediated lung inflammation model.
- Anti-tumor activity of a Siglec-10 mAb was determined using an MC38 syngeneic colon adenocarcinoma mouse model.

**SIGLEC10 mRNA expression levels in diverse human cancers from the TCGA (The Cancer Genome Atlas) and normal matched-tissue from the GTEX (Genotype Tissue Expression Project).** Boxes show the median and whiskers indicate min to max. **p-values** with Welch’s test correction. **p<0.05; ***p<0.005 as determined by two-way ANOVA with Sidak’s multiple comparisons. CR, complete response; PR, partial response; TGI, tumor growth inhibition.

** Siglec-10 expression inversely correlates with patient survival and prognosis in colon adenocarcinoma**

**Siglec-10 is selectively expressed on myeloid cells and upregulated in human tumor samples**

**Antibody blockage promotes anti-tumor immunity through activation of TAMs and dendritic cells**

**Siglec-10 mAb monotherapy reduces tumor progression**

**Siglec-10 mAb enhances type-1 cytokine production in a model of TLR-mediated lung inflammation**

**Siglec-10 mAb monotherapy activates innate and adaptive immune response in tumor**

**CONCLUSIONS/DISCUSSION**

- Siglec-10 is highly expressed on tumor-associated myeloid cells and antibody blockade promotes anti-tumor immunity through activation of TAMs and dendritic cells.
- Our findings highlight Siglec-10 as a promising myeloid cell target for enhancing anti-tumor immunity in solid tumors.

**REFERENCES**


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