Glucocorticoid-Induced TNFR-Related Protein (GITR) Immune Pathway

About GITR

Glucocorticoid-induced TNFR-related protein (GITR) is a costimulatory activating receptor on the surface of T cells and other immune cells that functions to energize T cell responses to antigens.\(^1,2\) As a member of the tumor necrosis factor receptor (TNFR) superfamily of costimulatory receptors, GITR interacts with its ligand, GITRL, on neighboring immune cells.

**GITR and Immune Function**

Downstream effects of GITR activation through ligand interaction are dependent on cell type:

- **On T effector cells (T eff)**, GITR signaling enhances survival and proliferation, thereby increasing cancer-killing activity.\(^3\)
- **On T regulatory cells (Treg)**, GITR signaling blocks the suppressive abilities of Tregs, further enhancing cytotoxic T cell function.\(^4\)

Overall, GITR activation serves to boost the immune system's ability to respond to threats, leading to potent anti-tumor immunity.

**GITR and Cancer**

In preclinical studies, activation of GITR signaling through an anti-GITR agonist enhances immunity through the activation of cytotoxic T cells and inhibition of immune-suppressive Treg activity.\(^5\)

**Interactions with Other Pathways**

By energizing the immune system, GITR signaling may synergize with other pathways to promote enhanced tumor killing activity.\(^7,8\)

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The GITR pathway is just one of many immune pathways under investigation at Bristol-Myers Squibb. Learn more about our work in immuno-oncology by visiting: https://iopathway.web.bms.com