Involvement in regular immune function

- KIRs are an important regulatory component of the immune system.1
- On NK cells, KIRs mediate recognition of healthy cells through interactions with the major histocompatibility complex I (MHC I) on the surface of most healthy cells. This interaction informs the NK cells that the cell is healthy and should not be destroyed.1
- Most KIRs are inhibitory, meaning they suppress the killing activity of NK cells so they don’t attack healthy cells.1

Hypothesis for involvement in tumor growth

- Tumors have developed mechanisms to hide from immune system detection by mimicking the MHC I profile of a healthy cell. This process allows tumor cells to evade NK cell-mediated recognition and destruction.1,3
- In preclinical studies, blockade of inhibitory KIRs has been shown to help restore NK cell-mediated immune activity which can help NK cells recognize tumor cells.4,5

Interaction with other pathways

- Preclinical studies also suggest that targeting the KIRs pathway in combination with other immune pathways may be a key strategy to more effectively activate the antitumor immune response by targeting two complementary tumor immune escape mechanisms.6

About KIR

Inhibitory killer cell immunoglobulin-like receptors (KIRs) are immune checkpoint receptors expressed on the surface of natural killer (NK) cells and cytotoxic T cells.1,2 NK cells and T cells are a type of white blood cell that are part of the immune system. Activation of these cells enables them to kill unhealthy or foreign cells.1,2