ABSTRACT

There is provided a pharmaceutical composition for preventing or treating cancer comprising, as active ingredients, a fusion protein dimer comprising an IL-2 protein or a variant thereof and a CD80 protein or a fragment thereof, and an immune checkpoint inhibitor. The fusion protein containing an CD80 fragment, an Fc domain of an immunoglobulin, and an IL-2 variant in an embodiment can activate immune cells such as natural killer cells as well as control the immune cell regulatory activity of regulatory T cells. In addition, the combined administration of the fusion protein and an immune checkpoint inhibitor such as Keytruda known as a PD-1 inhibitor can effectively inhibit cancer. Therefore, a pharmaceutical composition containing, as active ingredients, a fusion protein dimer comprising an IL-2 protein or a variant thereof and a CD80 protein or a fragment thereof, and an immune checkpoint inhibitor can be effectively applied to the treatment of cancer and has high industrial applicability.