

## Abstract

In this study, we present a novel therapeutic approach for colorectal cancer by integrating oncolytic virotherapy with a peptide-based immune checkpoint inhibitor. We previously engineered a synthetic chimeric virus (VMG) that expresses the glycoprotein (G) from Morreton virus (MorV) while retaining the structural genes from vesicular stomatitis virus (VSV). Additionally, a 12-amino acid linear peptide, identified through phage display biopanning, was found to inhibit the CD47/SIRP $\alpha$  interaction, thereby enhancing macrophage-mediated phagocytosis of tumor cells. The antitumor efficacy of this combination therapy was evaluated in two syngeneic mouse models, CT26 and MC38. Our findings demonstrate that the combined treatment significantly prolonged survival and delayed tumor growth in both CT26 and MC38 tumor-bearing mice.