Anti-PD-1/PD-L1 therapies may also function through a direct effect on macrophages

PD-1 and PD-L1 blocking antibodies are known to fight cancer by unleashing the body's T cells. Now, researchers at the Stanford University School of Medicine have shown that the therapy also fights cancer in a completely different way, by prompting macrophages to engulf and devour cancer cells.

Building on previous research showing that anti-CD47 antibodies prompt macrophages to destroy cancer cells Dr. Irving L. Weissman's group investigated the role of PD-1 signaling in tumor-associated macrophages (TAMs). The group discovered that that both mouse and human TAMs express PD-1. TAM PD-1 expression correlated negatively with phagocytic potency against tumor cells, and blockade of PD-1/PD-L1 *in vivo* increased macrophage phagocytosis, thereby reducing tumor growth and increasing the survival of mice in mouse tumor models in a macrophage-dependent fashion.

The authors used Bio X Cell's anti-mouse PD-1 antibody (clone 29F.1A12) and anti-mouse CD47 antibody (clone B6.H12) to block PD-1 and CD47 signaling respectively. The authors also used Bio X Cell's anti-CSF1R antibody (clone AFS98) to deplete TAMs and confirm their role in decreasing tumor burden.

See the article in Nature: http://www.nature.com/nature/journal/v545/n7655/full/nature22396.html