

Abstract

The objective of the invention is to provide cross-species anti-latent TGF-beta 1 antibodies which inhibit a protease mediated activation of latent TGF-beta 1 without inhibiting integrin mediated activation of latent TGF-beta 1. To obtain the anti-latent TGF-beta 1 antibodies of the invention, anti-latent-latent TGF-beta 1 antibodies which inhibit a protease mediated activation of latent TGF-beta 1 without inhibiting integrin mediated activation of latent TGF-beta 1 were screened, and then humanized, and further optimized. The invention also provides combination therapies comprising an anti-latent TGF-beta 1 antibody and one or more immune checkpoint inhibitors, preferably a PD-1 axis binding antagonists.