

This week in therapeutics

Indication	Target/marker/pathway	Summary	Licensing status	Publication and contact information
Inflammation				
Asthma	Programmed cell death 1 ligand 2 (PDCD1LG2; B7-DC; PD-L2); repulsive guidance molecule family member b (RGMB)	<p><i>In vitro</i> and mouse studies suggest promoting the PD-L2-RGMB co-inhibitory interaction could help treat asthma. <i>In vitro</i> and in cellular assays, RGMB bound to PD-L2 but not PD-L1 (CD274; B7-H1) or other related ligands. In a mouse model of intranasal antigen-induced respiratory tolerance, <i>Pd-l2</i> knockout or intranasal administration of an anti-<i>Pd-l2</i> mAb or anti-Rgmb mAb prevented respiratory tolerance and expansion of CD4⁺ T cell numbers. In a mouse model of intranasal antigen-induced asthma, both antibodies prevented the development of respiratory tolerance, resulting in severe airway hyperactivity and lung inflammation upon rechallenge with antigen. Next steps could include determining whether the PD-L2-RGMB interaction can be targeted for cancer immunotherapy.</p> <p>AstraZeneca plc has AMP-224, a fusion protein containing the extracellular domain of PD-L2 and the Fc portion of IgG, in Phase I trials to treat cancer.</p> <p>SciBX 7(21); doi:10.1038/scibx.2014.617 Published online May 29, 2014</p>	Patent and licensing status unavailable	<p>Xiao, Y. <i>et al. J. Exp. Med.</i>; published online April 21, 2014; doi:10.1084/jem.20130790</p> <p>Contact: Gordon J. Freeman, Harvard Medical School, Boston, Mass. e-mail: gordon_freeman@dfci.harvard.edu</p>