

### **Supplementary Movie 1**

Mitomycin pretreated SCR-MSCs (**Supplementary Movie 1a**) and L2A-KD MSCs (**Supplementary Movie 1b**) were cocultured with splenocytes in the presence of anti-CD3/CD28 antibodies. Took images every 30min within 12h of coculture initiation by Operetta High-Content Imaging System.