



**Supplementary Fig. 1.** The representative images of the CBA in each level of visual scores. Anti-human IgG antibody binding (red fluorescence) is observed along the cell surface which co-localizes with MuSK-GFP expressed on the surface of HEK293 cells (green fluorescence). CBA: cell-based assay, HEK293: human embryonic kidney 293, MuSK-GFP: muscle-specific tyrosine kinase fused to green fluorescent protein