

Antibody	Experiment	Problematic	Cell line	Comments	Landon Notes
Recombinant Anti-LRRK2 antibody [MJF2 (c41-2)] (ab133474)	IF	Yes	RAW 264.7 (ATCC)	Robust signal detected both on membrane and in cytoplasm with different drug treatments (LLOME, CO, E.coli/yeast bioparticles etc.). Looks indistinguishable with RAW264.7 LRRK2 KO cell line	
			RAW 264.7 LRRK2 KO (ATCC)	Show strong off-target signal when RAW264.7 LRRK2 KO cell line is used for IF staining	
			HEK293T		
			A549		
			A549 with stable GFP-LAMP1 expression	LRRK2 signal indistinguishable comparing to RAW264.7 LRRK2 KO line	
	WB	No	A549 LRRK2 KO		PFAMethanol Fixation: The WT and the KO showed similar signal intensity and puncta. Hard to decipher which signal is from LRRK2 or nonspecific background
			Microglia WT vs. LRRK2 KO		
			HEK293T LRRK2 overexpression vs Untransfected		PFAMethanol Fixation: Clear and obvious which cells are transfected which are not. MS-2 treatment shows clear filament formation with the untagged LRRK2 overexpression construct
			RAW 264.7 (ATCC)		
			RAW 264.7 LRRK2 KO (ATCC)	No obvious signal detected where LRRK2 band should migrate to	
			A549 WT vs LRRK2 KO		
			Microglia WT vs. LRRK2 KO		
			HEK293T LRRK2 overexpression vs untransfected		