



**Figure S8 The GEF activity of *net1* is essential to induce dorsal gene expression.**

Zebrafish embryos were co-injected with the indicated MOs and mRNAs at the one-cell stage and subjected to UV exposure at 64-cell stage for 10 min, and then harvested at sphere stage for *in situ* hybridization. *net1* 2mix, 200 pg *Flag-net1* mRNA together 1 ng AS-Flag-photo-MO; L266E 2mix, 200 pg *Flag-net1-L266E* mRNA and 1 ng AS-Flag-photo-MO; W437L 2mix, 200 pg *Flag-net1-W437L* mRNA and 1 ng AS-Flag-photo-MO. Note that the UV exposure-induced expression of wild-type *net1* while not *net1* GEF mutants induced enlarged expression domains of dorsal marker genes.