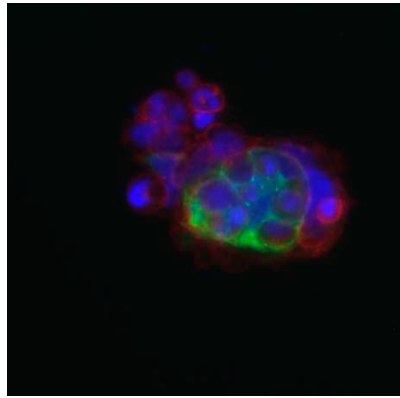
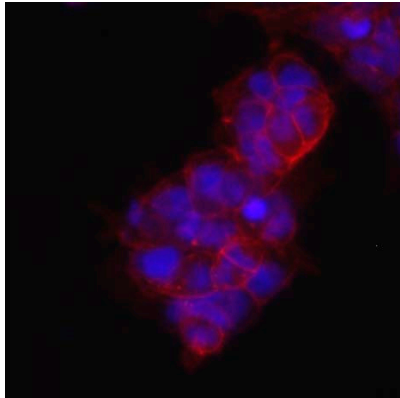


Supplementary Figure S2. The mRNA expression of *GRIK1*, *GRIK2*, *GRIK3*, *GRIK4*, and *GRIK5* genes in peripheral blood cells, lymphoblastoid cells, and the human brain. Lane 1 is the 100 bp ladder DNA marker; lane 2 is the peripheral blood cell; lane 3 is the lymphoblastoid cell; lane 4 is the human brain tissue; lane 5 is the negative control. The *GAPDH* gene was used as an internal control gene. The differences in gene expression activity between the two groups (compared with human brain tissue) were analyzed using Student's t-tests. (* $p < 0.05$; $n = 3$)

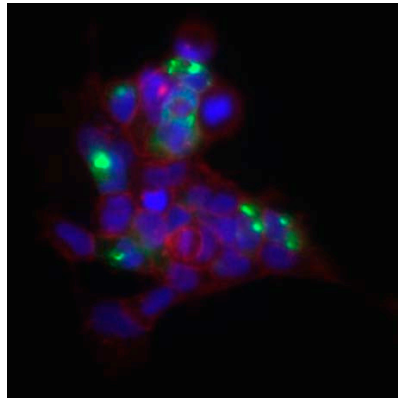
(A)



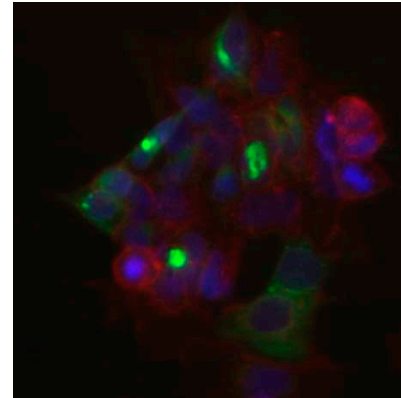
GRIK1^{WT}



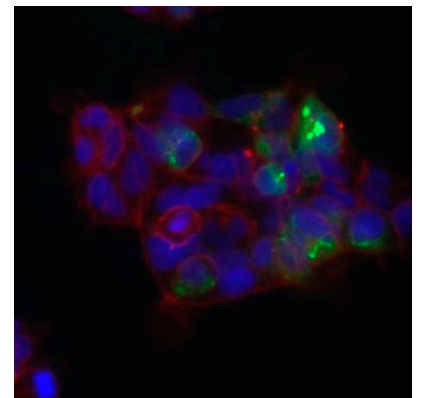
GRIK1^{p.Phe24fs}



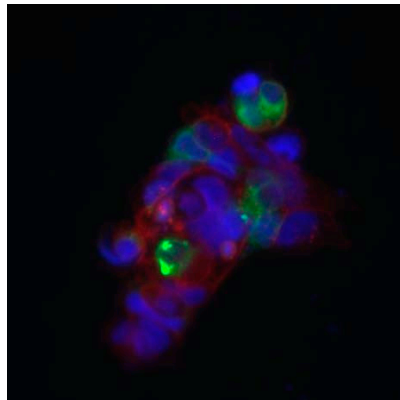
GRIK1^{p.Leu25Phe}



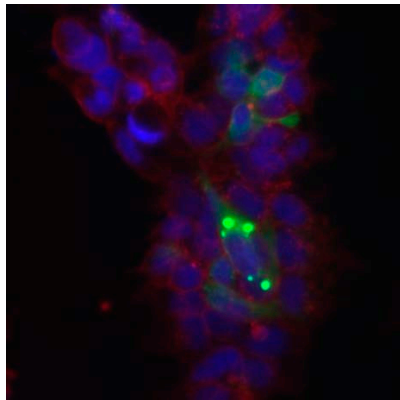
GRIK1^{p.Arg203Leu}



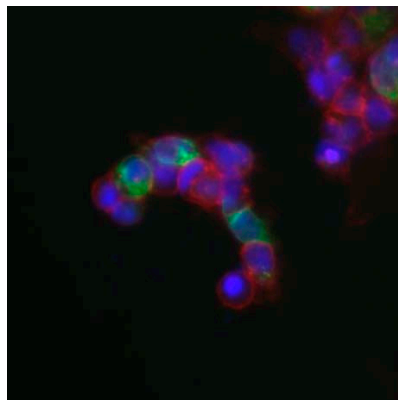
GRIK1^{p.Ala332Val}



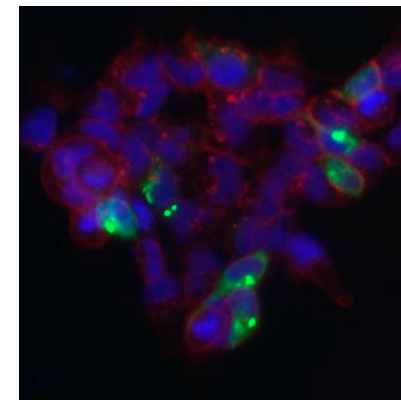
GRIK1^{p.His336Arg}



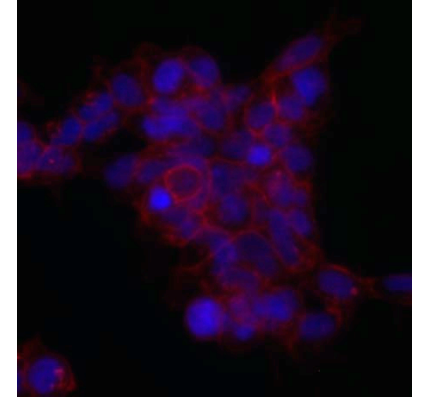
GRIK1^{p.Val343Ile}



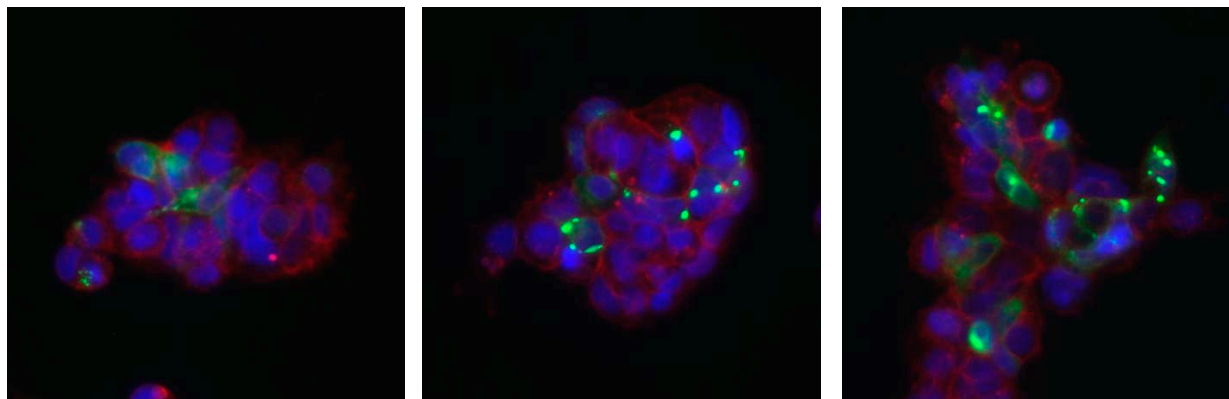
GRIK1^{p.Arg558Gln}



GRIK1^{p.Val567Ile}



GRIK1^{p.Thr882fs}

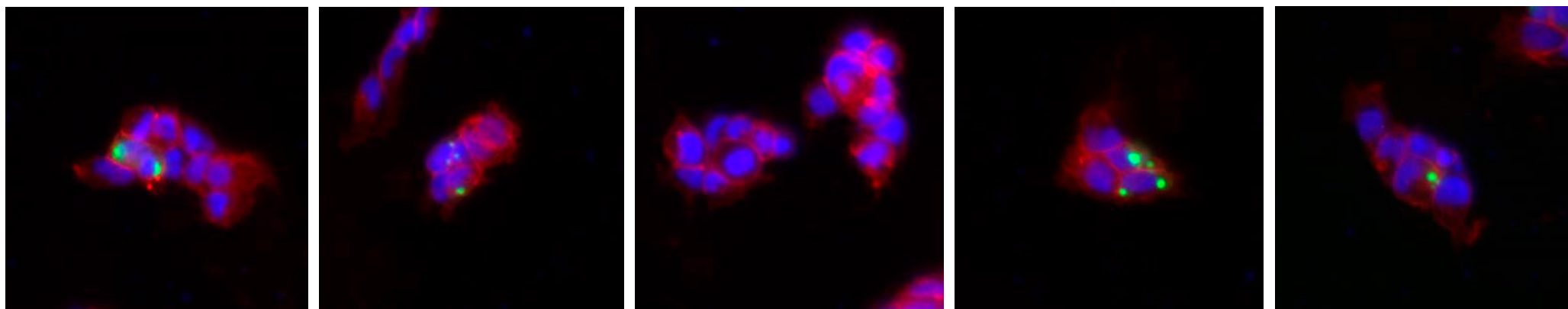


*GRIK1*p.Leu902Ser

*GRIK1*p.Arg904Gln

*GRIK1*p.Arg910Gln

(B)



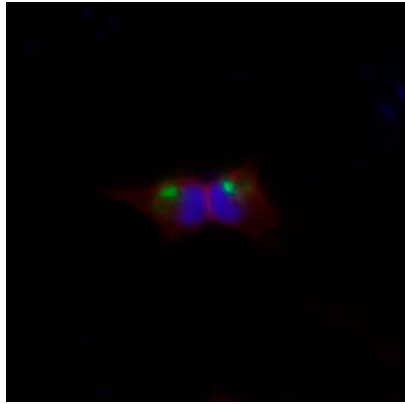
GRIK2^{WT}

*GRIK2*p.His253Tyr

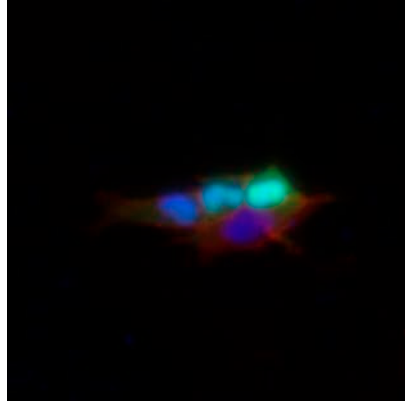
*GRIK2*p.Arg300Ter

*GRIK2*p.Tyr454His

*GRIK2*p.Val766Ile

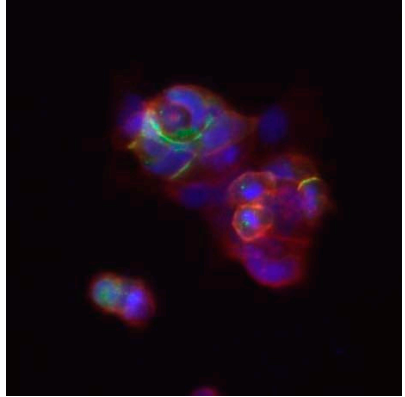


GRIK2^{p.Arg874Gln}

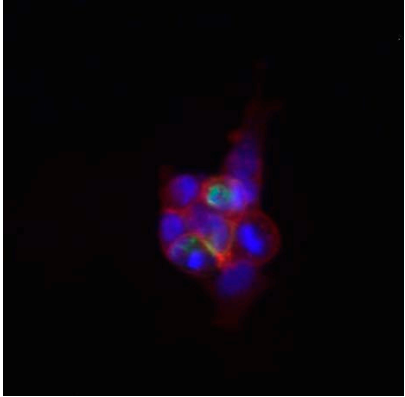


GFP

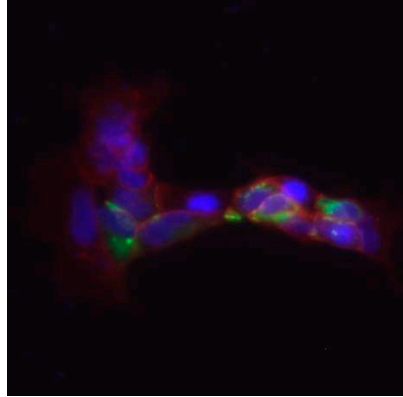
(C)



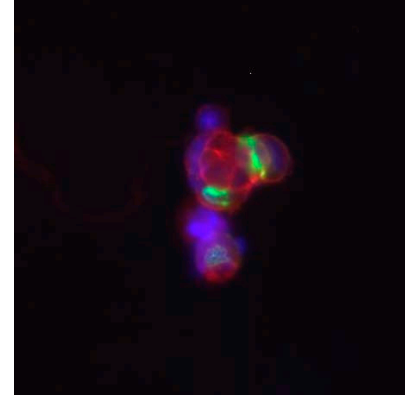
GRIK3^{WT}



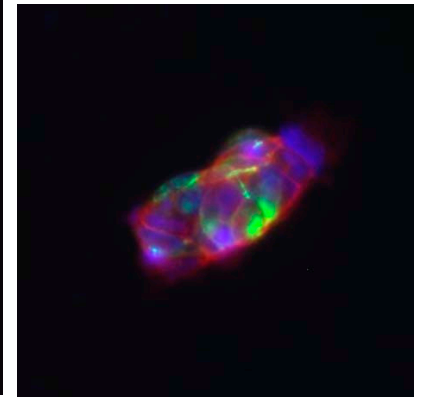
GRIK3^{p.Arg215His}



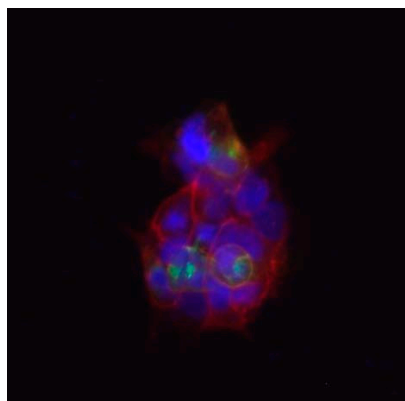
GRIK3^{p.Ser310Ala}



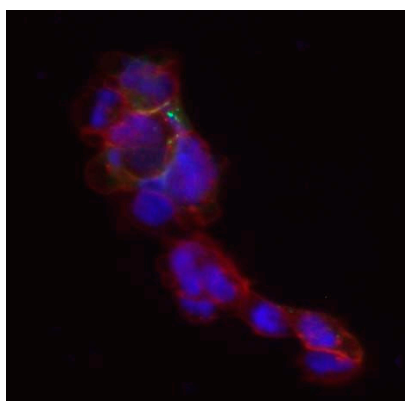
GRIK3^{p.Ser310Pro}



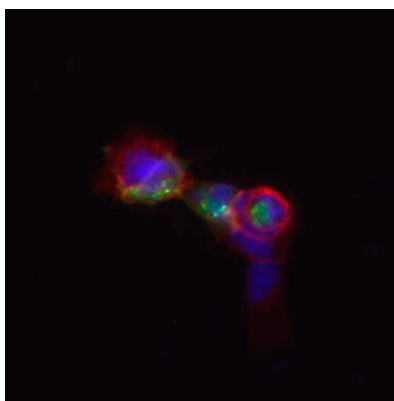
GRIK3^{p.Gly360Ser}



GRIK3^{p.Val746Ile}

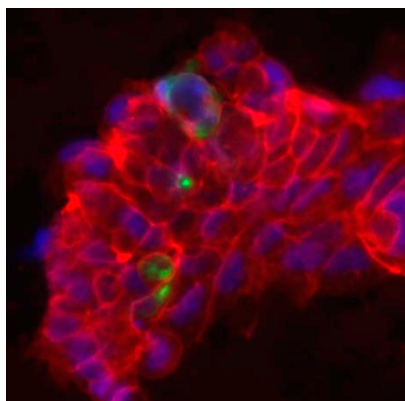


GRIK3^{p.Arg867Cys}

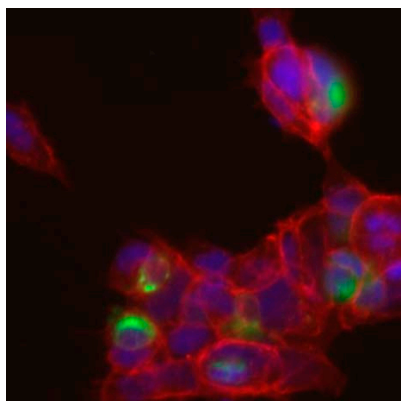


GRIK3^{p.Pro903Ala}

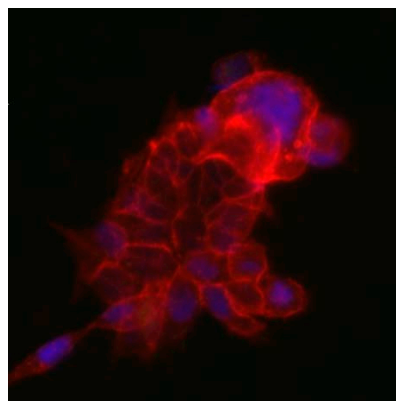
(D)



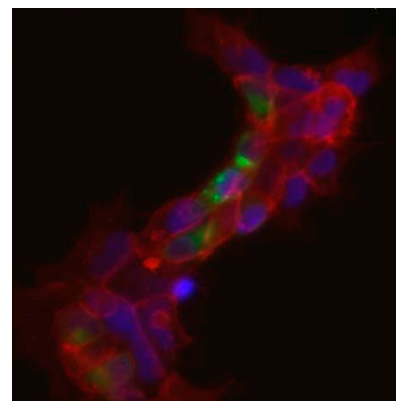
GRIK4^{WT}



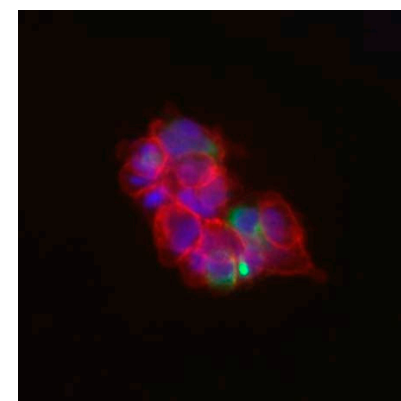
GRIK4^{p.Ser222Cys}



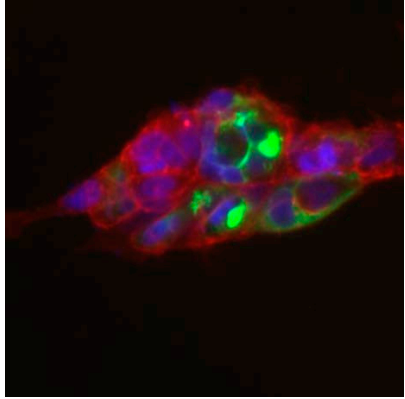
GRIK4^{p.Gln342Ter}



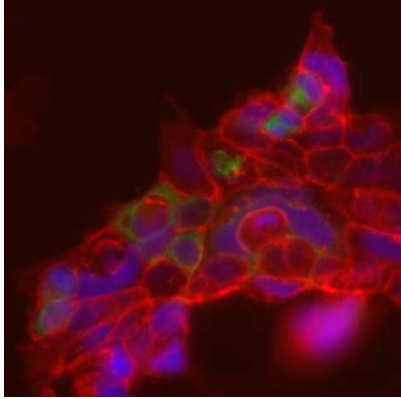
GRIK4^{p.Ser402Asn}



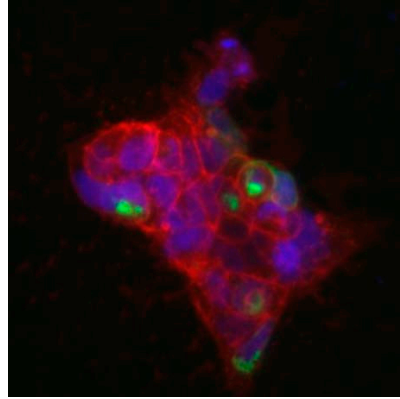
GRIK4^{p.His403Gln}



*GRIK4*p.Arg460Gln



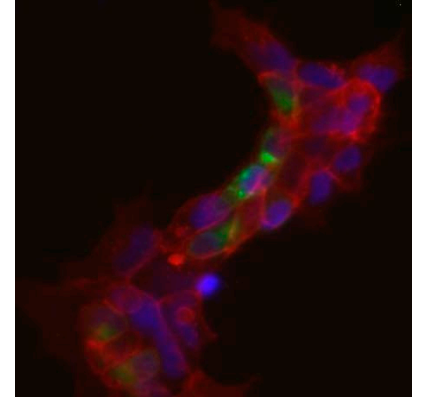
*GRIK4*p.Arg507Trp



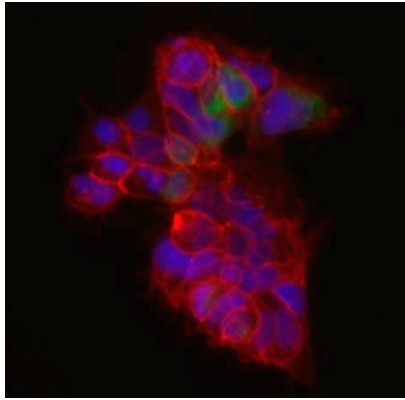
*GRIK4*p.Arg583Gln



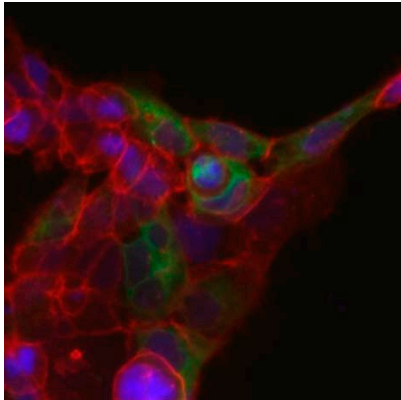
*GRIK4*p.Pro600Leu



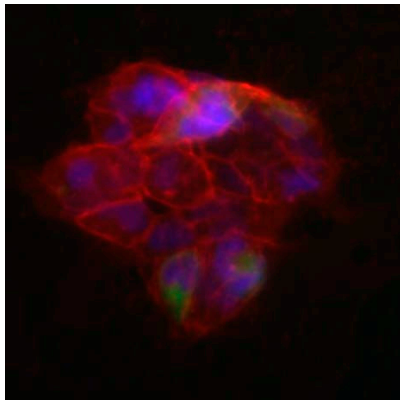
*GRIK4*p.Arg760Pro



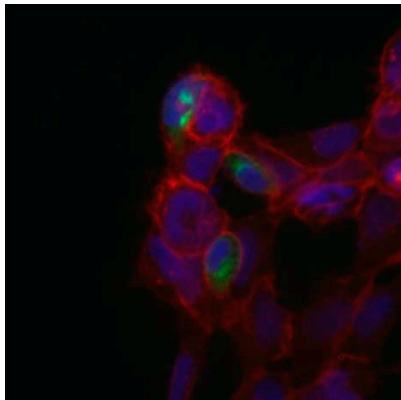
*GRIK4*p.Asp857Asn



*GRIK4*p.Pro873Ser

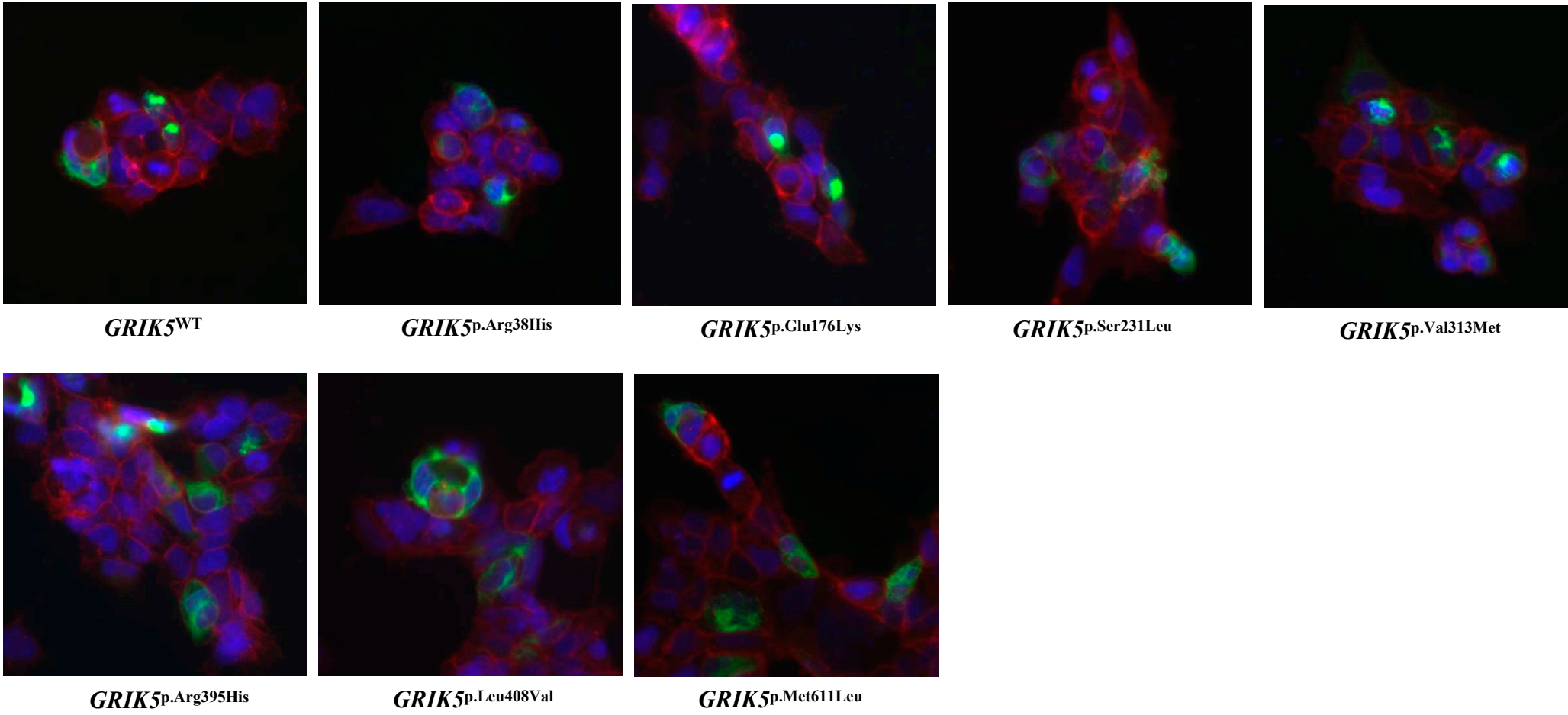


*GRIK4*p.Pro923Thr



*GRIK4*p.Arg927His

(E)



Supplementary Figure 3. Localization analysis of GRIK gene family mutants in HEK-293 cells. (A) GRIK1; (B) GRIK2; (C) GRIK3; (D) GRIK4; (E) GRIK5. Green: target gene. Red: cell membrane marker (wheat germ agglutinin). Blue: cell nuclei (DAPI).