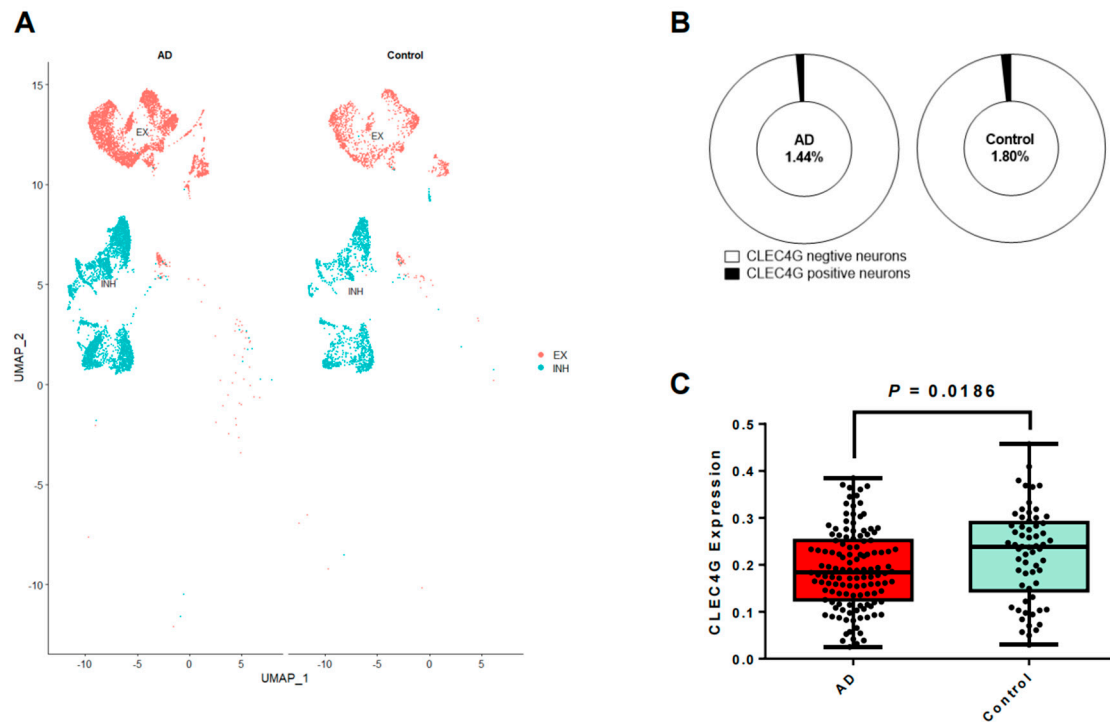
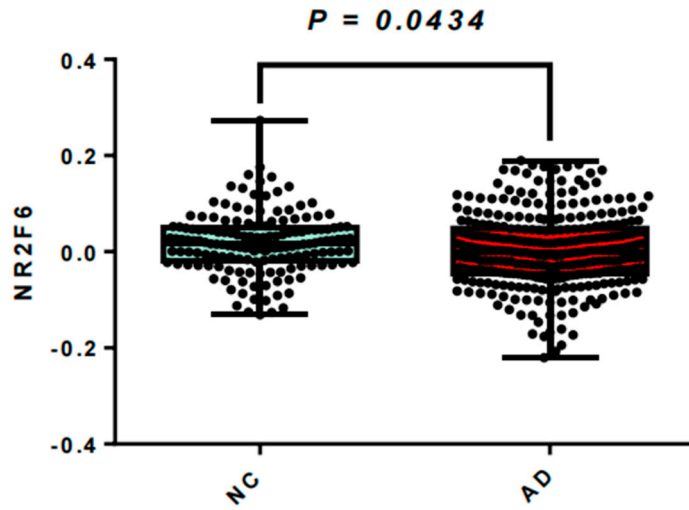


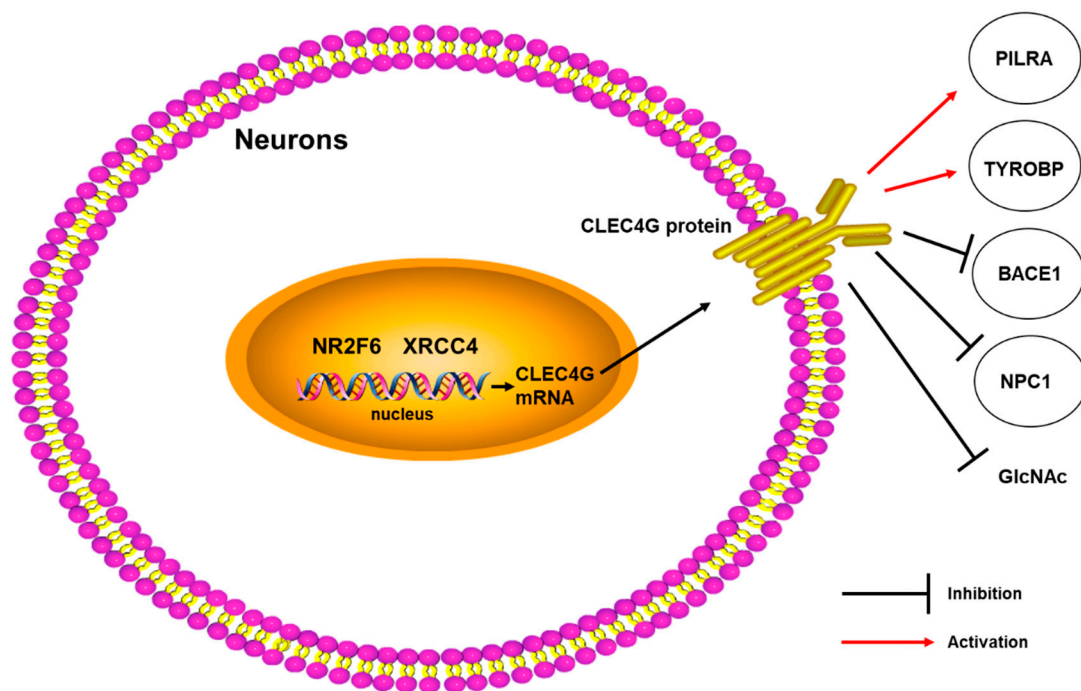
## Supplementary Materials



**Figure S1. Analysis of CLEC4G expression in neuronal cell single-cell data.** (A) UMAP visualization of excitatory neurons (EX) and inhibitory neurons (INH) in AD and control groups. (B) CLEC4G expression ratio in neurons of the AD and control groups. (scRNA-seq data source: GSE174367) (C) CLEC4G expression level in the AD and control groups.



**Figure S2. Comparison of NR2F6 Expression Levels between Normal (NC) and Alzheimer's Disease (AD) Groups.** Data resource: GSE33000 Dataset from GEO database.



**Figure S3. Schematic figure of hypothetical regulatory pathway of CLEC4G in neurons.**

**Table S1. Details of GEO series included in this analysis**

GEO series	Contributor, Year	Alzheimer's disease	Non-demented	Platform
GSE33000	Narayanan M et al, 2014	310	157	Rosetta/Merck Human 44k 1.1 microarray
GSE39420	Antonell A et al, 2015	14	7	[HuGene-1_1-st] Affymetrix Human Gene 1.1 ST Array
GSE174367	Morabito S et al, 2021	38676 (nuclei)	22796 (nuclei)	Illumina NovaSeq 6000

**Table S2. Detailed culture medium formulation**

Medium	Components	Manufacturer	Concentration
NIM1	DMEM/F12	Gibco	50%
	Neurobasal	Gibco	50%
	N2	STEMCELL	1X
	B27	STEMCELL	1X
	hLIF	PEPROTech	10 ng/ml
	SB431542	Med Chem Express	2 $\mu$ M
	CHIR99021	Med Chem Express	3 $\mu$ M
	Compound E	Med Chem Express	0.1 $\mu$ M

NIM2	DMEM/F12	Gibco	50%
	Neurobasal	Gibco	50%
	N2	STEMCELL	1X
	B27	STEMCELL	1X
	hLIF	PEPROTech	10 ng/ml
	SB431542	Med Chem Express	4 $\mu$ M
	CHIR99021	Med Chem Express	3 $\mu$ M
	Compound E	Med Chem Express	0.1 $\mu$ M
NSMM	DMEM/F12	Gibco	50%
	Neurobasal	Gibco	50%
	N2	STEMCELL	1X
	B27	STEMCELL	1X
	hLIF	PEPROTech	10 ng/ml
	SB431542	Med Chem Express	2 $\mu$ M
	CHIR99021	Med Chem Express	3 $\mu$ M
DM	DMEM/F12	Gibco	
	N2	STEMCELL	1X

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B27	STEMCELL	1X
dbcAMP	Sigma	400 $\mu$ M
ascorbic acid	Sigma	200 $\mu$ M
BDNF	PEPROTech	10 ng/ml
NGF	PEPROTech	10 ng/ml

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