

S8 Table The statistically enriched GO terms of Sub 3

GO	Style	Term	P-value	Gene count	The involved genes
Biological processes	Metabolic	positive regulation of nitrogen compound metabolic process	2.40E-02	6/56	GLOCKE5RRA,GRN1,MAP3K1,INFAT3,ZNF423
		positive regulation of RNA metabolic process	3.50E-02	(16.6%)	GLOCKE5RRA,GRN1,MAP3K1,INFAT3
	Regulation	homophilic cell adhesion	3.20E-11		PCDH11,PCDH12,PCDH10,PCDH13,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		cell-cell adhesion	1.20E-09	19/56	NLGN1,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		cell adhesion	8.80E-07	(52.7%)	WISPI,NLGN1,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
Cellular component	Plasma membrane	biological adhesion	8.90E-07		NLGN1,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		integral to plasma membrane	8.80E-05		GRN1,NLGN1,KCNJ2,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		intrinsic to plasma membrane	1.10E-04	27/53	GRN1,NLGN1,KCNJ2,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		plasma membrane	4.40E-03	(81.8%)	CACNB1,GRN1,MAP3K1,NLGN1,KCNJ2,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
		plasma membrane part	5.00E-03		CACNB1,GRN1,MAP3K1,NLGN1,KCNJ2,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100
Molecular function	Ion binding	calcium ion binding	7.10E-06	18/39 (46.1%)	ASPM,CACNB1,GRN1,PCDH11,PCDH12,PCDH13,PCDH14,PCDH15,PCDH16,PCDH17,PCDH18,PCDH19,PCDH20,PCDH21,PCDH22,PCDH23,PCDH24,PCDH25,PCDH26,PCDH27,PCDH28,PCDH29,PCDH30,PCDH31,PCDH32,PCDH33,PCDH34,PCDH35,PCDH36,PCDH37,PCDH38,PCDH39,PCDH40,PCDH41,PCDH42,PCDH43,PCDH44,PCDH45,PCDH46,PCDH47,PCDH48,PCDH49,PCDH50,PCDH51,PCDH52,PCDH53,PCDH54,PCDH55,PCDH56,PCDH57,PCDH58,PCDH59,PCDH60,PCDH61,PCDH62,PCDH63,PCDH64,PCDH65,PCDH66,PCDH67,PCDH68,PCDH69,PCDH70,PCDH71,PCDH72,PCDH73,PCDH74,PCDH75,PCDH76,PCDH77,PCDH78,PCDH79,PCDH80,PCDH81,PCDH82,PCDH83,PCDH84,PCDH85,PCDH86,PCDH87,PCDH88,PCDH89,PCDH90,PCDH91,PCDH92,PCDH93,PCDH94,PCDH95,PCDH96,PCDH97,PCDH98,PCDH99,PCDH100