TaqMan® Human Alzheimer's Array
TaqMan® Mouse Alzheimer's Array

These arrays are part of a collection of TaqMan® Gene Signature Arrays that enable analysis of hundreds of TaqMan® Gene Expression Assays on a micro fluidic card with minimal effort.

Alzheimer's disease (AD) is a progressive and fatal neurodegenerative disorder for which there is no effective treatment. The disease has a characteristic neuropathology—cerebral plaques containing beta-amyloid (Aß) deposits and neurofibrillary tangles composed of the microtubule-associated protein tau. There is strong evidence that generation and deposition of beta-amyloid has a pivotal role in pathogenesis. The formation of neurofibrillary tangles, glutamateric excitotoxicity, activation of microglial cells and astrocytes, inflammation, activation of the cascade of apoptotic cell death, oxidation and lipid peroxidation are thought to be secondary consequences of production and accumulation of beta-amyloid[1]. Overexpression of human amyloid precursor protein (APP) in transgenic mouse models of Alzheimer's disease result in neural plaques resembling those in human AD, and the mice accumulate Aß and show learning and memory deficits[2].

TaqMan Gene Expression Assays for the TaqMan® Alzheimer's Arrays were based on the 'amyloid hypothesis'. We selected genes involved in APP processing that generate Aß and included genes implicated in multiple secondary steps of Aß aggregation, tau hyperphosphorylation, excitotoxicity, inflammation, oxidation and microglial activation. We also added assays for genes involved in cholesterol biosynthesis because of the correlation between high cholesterol and increased risk of AD[3]. Numerous reports of genes associated with AD pathology, biochemistry and genetics are also included[4-18].

Two TaqMan Arrays for Alzheimer's are available; one for human and one for mouse. The mouse assays closely follow the human array and are from orthologous genes of the human assays. The human array contains 94 test assays and two endogenous controls (18S and HPRT1). The mouse array has 92 assays and four controls (18S, actb, hprt1 and ipo8).

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TaqMan® Gene Signature Arrays

Gene Signature Array Name	# of Targets/Controls	Format	Pack Size	Part Number
Human Alzheimer's Array	94/2	Format 96a	4 arrays/pack	4378713
Mouse Alzheimer's Array	92/4	Format 96a	4 arrays/pack	4378714

Human Alzheimer's Array

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
A	ABCA1	ADAM10	ADAM17	ADAM9	APBA1	APBA2	APBA3	APBB1	APBB2	APBB3	18S	APCS	APH1A	APH1B	APLP1	APLP2	APOE	APP	BACE1	BACE2	CAPN1	CAPNS2	CASP3	CASP6	1
B	CDC2	CDK5	CDK5R1	SLC18A3	CHRM1	CHRM3	CHRNA4	CSNK1A1	CTSB	CTSC	CTSD	CTSG	FALZ	GJB1	GLS	GRIN1	GRIN2A	GRIN2B	GRIN2D	GSK3B	HADH2	IDE	IFNG	IL1A	
C	IL1B	IL6	INS	INSR	LRP1	LRP2	LRPAP1	MAPK1	MAPK3	MAPT	MME	NCSTN	PDE8B	PSENEN	PLD1	PPP2CA	PRKACB	PRKCA	PRKCB1	PRKCE	PRKCG	PKN1	PSEN1	PSEN2	2
D	SERPINA3	SNCA	SOAT1	SOD2	TFAP4	TNF	UCHL1	VSNL1	GAL	ACHE	AGER	APPBP1	BCHE	CAPNS1	CHRNA7	CSNK1D	CYP46A1	GAP43	GAPDH	GRIN2C	SLC30A3	ST6GAL1	UBQLN1	HPRT1	
E	ABCA1	ADAM10	ADAM17	ADAM9	APBA1	APBA2	APBA3	APBB1	APBB2	APBB3	18S	APCS	APH1A	APH1B	APLP1	APLP2	APOE	APP	BACE1	BACE2	CAPN1	CAPNS2	CASP3	CASP6	3
F	CDC2	CDK5	CDK5R1	SLC18A3	CHRM1	CHRM3	CHRNA4	CSNK1A1	CTSB	CTSC	CTSD	CTSG	FALZ	GJB1	GLS	GRIN1	GRIN2A	GRIN2B	GRIN2D	GSK3B	HADH2	IDE	IFNG	IL1A	
G	IL1B	IL6	INS	INSR	LRP1	LRP2	LRPAP1	MAPK1	MAPK3	MAPT	MME	NCSTN	PDE8B	PSENEN	PLD1	PPP2CA	PRKACB	PRKCA	PRKCB1	PRKCE	PRKCG	PKN1	PSEN1	PSEN2	4
H	SERPINA3	SNCA	SOAT1	SOD2	TFAP4	TNF	UCHL1	VSNL1	GAL	ACHE	AGER	APPBP1	BCHE	CAPNS1	CHRNA7	CSNK1D	CYP46A1	GAP43	GAPDH	GRIN2C	SLC30A3	ST6GAL1	UBQLN1	HPRT1	
I	ABCA1	ADAM10	ADAM17	ADAM9	APBA1	APBA2	APBA3	APBB1	APBB2	APBB3	18S	APCS	APH1A	APH1B	APLP1	APLP2	APOE	APP	BACE1	BACE2	CAPN1	CAPNS2	CASP3	CASP6	5
J	CDC2	CDK5	CDK5R1	SLC18A3	CHRM1	CHRM3	CHRNA4	CSNK1A1	CTSB	CTSC	CTSD	CTSG	FALZ	GJB1	GLS	GRIN1	GRIN2A	GRIN2B	GRIN2D	GSK3B	HADH2	IDE	IFNG	IL1A	
K	IL1B	IL6	INS	INSR	LRP1	LRP2	LRPAP1	MAPK1	MAPK3	MAPT	MME	NCSTN	PDE8B	PSENEN	PLD1	PPP2CA	PRKACB	PRKCA	PRKCB1	PRKCE	PRKCG	PKN1	PSEN1	PSEN2	6
L	SERPINA3	SNCA	SOAT1	SOD2	TFAP4	TNF	UCHL1	VSNL1	GAL	ACHE	AGER	APPBP1	BCHE	CAPNS1	CHRNA7	CSNK1D	CYP46A1	GAP43	GAPDH	GRIN2C	SLC30A3	ST6GAL1	UBQLN1	HPRT1	
M	ABCA1	ADAM10	ADAM17	ADAM9	APBA1	APBA2	APBA3	APBB1	APBB2	APBB3	18S	APCS	APH1A	APH1B	APLP1	APLP2	APOE	APP	BACE1	BACE2	CAPN1	CAPNS2	CASP3	CASP6	7
N	CDC2	CDK5	CDK5R1	SLC18A3	CHRM1	CHRM3	CHRNA4	CSNK1A1	CTSB	CTSC	CTSD	CTSG	FALZ	GJB1	GLS	GRIN1	GRIN2A	GRIN2B	GRIN2D	GSK3B	HADH2	IDE	IFNG	IL1A	
O	IL1B	IL6	INS	INSR	LRP1	LRP2	LRPAP1	MAPK1	MAPK3	MAPT	MME	NCSTN	PDE8B	PSENEN	PLD1	PPP2CA	PRKACB	PRKCA	PRKCB1	PRKCE	PRKCG	PKN1	PSEN1	PSEN2	8
P	SERPINA3	SNCA	SOAT1	SOD2	TFAP4	TNF	UCHL1	VSNL1	GAL	ACHE	AGER	APPBP1	BCHE	CAPNS1	CHRNA7	CSNK1D	CYP46A1	GAP43	GAPDH	GRIN2C	SLC30A3	ST6GAL1	UBQLN1	HPRT1	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

Mouse Alzheimer's Array

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
A	Abca1	Ache	Adam10	Adam17	Apba1	Apba3	Apbb1	Apbb2	Apbb3	Apcs	18S	Aph1a	Aph1b	Aplp1	Aplp2	Apoe	Appbp1	Bace1	Bace2	Bche	Capn1	Capns1	Casp6	Cdk5r1	1
B	Chrm1	Chrm3	Chrna4	Chrna7	Csnk1a1	Csnk1d	Ctsc	Ctsd	Ctsg	Cyp46a1	Falz	Gal	Gap43	Gapdh	Grin1	Grin2a	Grin2b	Grin2c	Grin2d	Gsk3b	Hadh2	Ide	Ifng	Il1a	
C	Il1b	Il6	Insr	Lrp1	Lrpap1	Mapk1	Mapk3	Mapt	Mme	Ncstn	Pde8b	Psenen	Ppp2ca	Prkacb	Prkcb1	Prkce	Prkcc	Pkn1	Psen1	Psen2	Serpina3n	Slc30a3	Sod2	St6gal1	2
D	Tcfap4	Tnf	Uchl1	Vsnl1	Gjb1	Ins1	Adam9	Ager	Apba2	App	Casp3	Cdc2a	Cdk5	Chat	Ctsb	Gls	Lrp2	Pld1	Prkca	Snca	Ubqln1	hprt1	actb	ipo8	
E	Abca1	Ache	Adam10	Adam17	Apba1	Apba3	Apbb1	Apbb2	Apbb3	Apcs	18S	Aph1a	Aph1b	Aplp1	Aplp2	Apoe	Appbp1	Bace1	Bace2	Bche	Capn1	Capns1	Casp6	Cdk5r1	3
F	Chrm1	Chrm3	Chrna4	Chrna7	Csnk1a1	Csnk1d	Ctsc	Ctsd	Ctsg	Cyp46a1	Falz	Gal	Gap43	Gapdh	Grin1	Grin2a	Grin2b	Grin2c	Grin2d	Gsk3b	Hadh2	Ide	Ifng	Il1a	
G	Il1b	Il6	Insr	Lrp1	Lrpap1	Mapk1	Mapk3	Mapt	Mme	Ncstn	Pde8b	Psenen	Ppp2ca	Prkacb	Prkcb1	Prkce	Prkcc	Pkn1	Psen1	Psen2	Serpina3n	Slc30a3	Sod2	St6gal1	4
H	Tcfap4	Tnf	Uchl1	Vsnl1	Gjb1	Ins1	Adam9	Ager	Apba2	App	Casp3	Cdc2a	Cdk5	Chat	Ctsb	Gls	Lrp2	Pld1	Prkca	Snca	Ubqln1	hprt1	actb	ipo8	
I	Abca1	Ache	Adam10	Adam17	Apba1	Apba3	Apbb1	Apbb2	Apbb3	Apcs	18S	Aph1a	Aph1b	Aplp1	Aplp2	Apoe	Appbp1	Bace1	Bace2	Bche	Capn1	Capns1	Casp6	Cdk5r1	5
J	Chrm1	Chrm3	Chrna4	Chrna7	Csnk1a1	Csnk1d	Ctsc	Ctsd	Ctsg	Cyp46a1	Falz	Gal	Gap43	Gapdh	Grin1	Grin2a	Grin2b	Grin2c	Grin2d	Gsk3b	Hadh2	Ide	Ifng	Il1a	
K	Il1b	Il6	Insr	Lrp1	Lrpap1	Mapk1	Mapk3	Mapt	Mme	Ncstn	Pde8b	Psenen	Ppp2ca	Prkacb	Prkcb1	Prkce	Prkcc	Pkn1	Psen1	Psen2	Serpina3n	Slc30a3	Sod2	St6gal1	6
L	Tcfap4	Tnf	Uchl1	Vsnl1	Gjb1	Ins1	Adam9	Ager	Apba2	App	Casp3	Cdc2a	Cdk5	Chat	Ctsb	Gls	Lrp2	Pld1	Prkca	Snca	Ubqln1	hprt1	actb	ipo8	
M	Abca1	Ache	Adam10	Adam17	Apba1	Apba3	Apbb1	Apbb2	Apbb3	Apcs	18S	Aph1a	Aph1b	Aplp1	Aplp2	Apoe	Appbp1	Bace1	Bace2	Bche	Capn1	Capns1	Casp6	Cdk5r1	7
N	Chrm1	Chrm3	Chrna4	Chrna7	Csnk1a1	Csnk1d	Ctsc	Ctsd	Ctsg	Cyp46a1	Falz	Gal	Gap43	Gapdh	Grin1	Grin2a	Grin2b	Grin2c	Grin2d	Gsk3b	Hadh2	Ide	Ifng	Il1a	
O	Il1b	Il6	Insr	Lrp1	Lrpap1	Mapk1	Mapk3	Mapt	Mme	Ncstn	Pde8b	Psenen	Ppp2ca	Prkacb	Prkcb1	Prkce	Prkcc	Pkn1	Psen1	Psen2	Serpina3n	Slc30a3	Sod2	St6gal1	8
P	Tcfap4	Tnf	Uchl1	Vsnl1	Gjb1	Ins1	Adam9	Ager	Apba2	App	Casp3	Cdc2a	Cdk5	Chat	Ctsb	Gls	Lrp2	Pld1	Prkca	Snca	Ubqln1	hprt1	actb	ipo8	
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Port

More arrays will be available soon! Register to receive new Gene Signature Array product announcements, or suggest an array at **taqmanarray.appliedbiosystems.com**

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