

Note: Red colored text in each table is changeable in context of Gene Synbol/ASD Risk Gene. "Negative Value (-)" means "Down-regulation" "Positive Value (+)" means "Upregulation".

ASD Risk Gene
Gene Symbol: FMR1

ENSEMBL ID: ENSG00000102081

Gene Name: fragile X mental retardation 1

Chromosome: X

Genetic Category: Rare Single Gene Mutation, Syndromic, Genetic Association, Functional

SFARI Gene-Score: High Confidence

Syndromic: Syndromic
Gene Biotype: Protein Coding

Reference: SFARI Gene Database (https://gene.sfari.org/database/human-gene/)

Chart 1. Expression Signature of ASD Risk Gene in Whole Cerebral Cortex

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Organ Type	Organ	Numbe Sample		Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0647	0.0275	Down- regulation	Idiopathic ASD vs Control	Whole Cortex	Postmortem Cerebral Cortex	49	54	Click here

Chart 2. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)9

ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical	Organ	Numbe Sample		Experiment Details
						Region		ASD	Control	
FMR1	High Confidence	-0.0779	0.13	Down- regulation	Idiopathic ASD vs Control	ВА9	Postmortem Cerebral Cortex	41	45	Click here

Chart 3. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)44/45

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Number (BA44/4	of Samples 5)	Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0336	0.833	Down- regulation	Idiopathic ASD vs Control	BA44/45	Postmortem Cerebral Cortex	27	19	Click here

Chart 4. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)24

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Number Samples		Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0718	0.526	Down- regulation	Idiopathic ASD vs Control	BA24	Postmortem Cerebral Cortex	30	18	Click here

Chart 5. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)4/6

ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA4/6)	Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.057	0.495	Down- regulation	Idiopathic ASD vs Control	BA4/6	Postmortem Cerebral Cortex	28	27	Click here

Chart 6. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)38

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA38)	Experiment Details
						-0 -		ASD	Control	
FMR1	High Confidence	-0.0638	0.495	Down- regulation	Idiopathic ASD vs Control	BA38	Postmortem Cerebral Cortex	26	17	Click here
hart 7. Ex	pression Sign	atures of	ASD Risk	Gene in Broo	lmann Area (E	BA)20/37	-	-		
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical region	Organ	Number (BA20/3	of Samples 7)	Experimen Details
								ASD	Control	
FMR1	High Confidence	-0.0357	0.831	Down- regulation	Idiopathic ASD vs Control	BA20/37	Postmortem Cerebral Cortex	22	26	Click here
hart 8. Ex	pression Sign	atures of	ASD Risk	Gene in Broo	lmann Area (E	BA)41/42/22				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample (BA41/	S	Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0361	0.527	Down- regulation	Idiopathic ASD vs Control	BA41/42/22	Postmortem Cerebral Cortex	40	33	Click here
hart 9. Ex	pression Sign	atures of	ASD Risk	Gene in Broo	lmann Area (E	BA)3/1/2/5				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample (BA3/1	S	Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.102	0.148	Down- regulation	Idiopathic ASD vs Control	BA3/1/2/5	Postmortem Cerebral Cortex	30	23	Click here
	xpression Sig	natures of	ASD Risl	c Gene in Bro	odmann Area	(BA)7		•		
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample		Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0761	0.193	Down- regulation	Idiopathic ASD vs Control	ВА7	Postmortem Cerebral Cortex	35	29	Click here
hart 11. E	xpression Sig	natures of	ASD Risk	Gene in Bro	odmann Area ((BA)39/40				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA39/40)	Experiment Details
						Region		ASD	Control	
FMR1	High Confidence	-0.0685	0.337	Down- regulation	Idiopathic ASD vs Control	BA39/40	Postmortem Cerebral Cortex	31	32	Click here
hart 12. E	xpression Sig	natures of	ASD Risl	c Gene in Bro	odmann Area	(BA)17				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA17)	Experiment Details
								ASD	Control	
FMR1	High Confidence	-0.0894	0.0956	Down- regulation	Idiopathic ASD vs Control	BA17	Postmortem Cerebral Cortex	28	28	Click here

Control

Cortex

Chart 1. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Organ Type:

Whole Cortex

Number of Subjects/Samples:

- i. Idiopathic ASD Individuals (Cortex): 49
- ii. Neurotypical Controls (Cortex): 54

Sample Characteristics:

- i. ASD Cortex: Frontal, Temporal, Parietal and Occipital Lobes
- ii. Control Cortex: Frontal, Temporal, Parietal and Occipital Lobes

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 2. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 9 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 9 (Idiopathic ASD): 41
- ii. Brodmann Area 9 (Control): 45

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 9 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 9 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 3. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 44/45 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 44/45 (Idiopathic ASD): 27
- ii. Brodmann Area 44/45 (Control): 19

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 44/45 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 44/45 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532539.

Chart 4. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 24 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 24 (Idiopathic ASD): 30
- ii. Brodmann Area 24 (Control): 18

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 24 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 24 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 5. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 4/6 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 4/6 (Idiopathic ASD): 28
- ii. Brodmann Area 4/6 (Control): 27

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 4/6 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 4/6 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 6. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 38 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 38 (Idiopathic ASD): 26
- ii. Brodmann Area 38 (Control): 17

Sample Characteristics:

- i. ASD Cortex : Brodmann Area 38 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 38 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

 $Gandal\,MJ, Haney\,JR, Wamsley\,B,\,et\,al.\,Broad\,transcriptomic\,dys regulation\,occurs\,across\,the\,cerebral\,cortex\,in\,ASD.\,Nature.\,2022; 611 (7936):532-539.$

Chart 7. Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 20/37 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 20/37 (Idiopathic ASD): 22
- ii. Brodmann Area 20/37 (Control): 26

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 20/37 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 20/37 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 8. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical region:

Brodmann Area 41/42/22 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 41/42/22 (Idiopathic ASD): 40
- ii. Brodmann Area 41/42/22 (Control): 33

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 41/42/22 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 41/42/22 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 9. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 3/1/2/5 (Parietal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 3/1/2/5 (Idiopathic ASD): 30
- ii. Brodmann Area 3/1/2/5 (Control): 23

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 3/1/2/5 of Parieta Lobe
- ii. Control Cortex: Brodmann Area 3/1/2/5 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 10. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical region:

Brodmann Area 7 (Parietal Lobe)

Number of Subjects/Samples:

- Brodmann Area 7 (Idiopathic ASD): 35
- . Brodmann Area 7 (Control): 29

Sample Characteristics:

i. Idiopathic ASD Cortex : Brodmann Area 7 of Parietal Lobe

ii. Neurotypical Control: Brodmann Area 7 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

Reference

Chart 11. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 39/40 (Parietal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 39/40 (Idiopathic ASD): 31
- ii. Brodmann Area 39/40 o(Control): 32

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 39/40 of Parietal Lobe
- ii. Control Cortex: Brodmann Area 39/40 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 12. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 17 (Occipital Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 17 of (Idiopathic ASD): 28
- ii. Brodmann Area 17 of (Control): 28

Sample Characteristics:

- i. Idiopathic ASD Cortex : Brodmann Area 17 of Occipital Lobe
- ii. Neurotypical Control : Brodmann Area 17 of Occipital Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

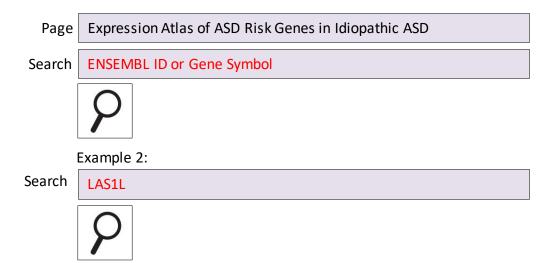
Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References



Note: Red colored text in each table is changeable in context of Gene Synbol/ASD Risk Gene. "Negative Value (-)" means "Down-regulation" "Positive Value (+)" means "Upregulation".

ASD Risk Gene
Gene Symbol: LAS1L

ENSEMBL ID: ENSG00000001497

Gene Name: LAS1 likeribosome biogenesis factor

Chromosome: X

Genetic Category: Rare Single Gene Mutation, Syndromic

SFARI Gene-Score: Suggestive Evidence

Syndromic: NA

Gene Biotype: Protein Coding

Reference: SFARI Gene Database (https://gene.sfari.org/database/human-gene/)

Chart 1. Expression Signatures of ASD Risk Gene in Whole Cerebral Cortex

ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Organ Type	Organ	Number Sample:	_	Experiment Details
								ASD	Control	
LAS1L	Suggestive Evidence	-0.029	0.667	Down- regulation	Idiopathic ASD vs Control	Whole Cortex	Postmortem Cerebral Cortex	338	297	Click here

Chart 2. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)9

ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical	Organ	Numbe Sample	_	Experiment Details
						Region		ASD	Control	
LAS1L	Suggestive Evidence	-0.0542	0.613	Down- regulation	ldiopathic ASD vs Control	ва9	Postmortem Cerebral Cortex	41	45	Click here

Chart 3. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)44/45

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Number (BA44/4	of Samples 5)	Experiment Details
						-		ASD	Control	
LAS1L	Suggestive Evidence	-0.0967	0.641	Down- regulation	Idiopathic ASD vs Control	BA44/45	Postmortem Cerebral Cortex	27	19	Click here

Chart 4. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)24

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA24)	Experiment Details
								ASD	Control	
LAS1L	Suggestive Evidence	0.0202	0.941	Up- regulation	Idiopathic ASD vs Control	BA24	Postmortem Cerebral Cortex	30	18	Click here

Chart 5. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)4/6

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA4/6)	Experiment Details
								ASD	Control	
LAS1L	Suggestive Evidence	-0.035	0.837	Down- regulation	Idiopathic ASD vs Control	BA4/6	Postmortem Cerebral Cortex	28	27	Click here

Chart 6. Expression Signatures of ASD Risk Gene in Brodmann Area (BA)38

ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA38)	Experiment Details
								ASD	Control	
LAS1L	Suggestive Evidence	-0.0206	0.925	Down- regulation	Idiopathic ASD vs Control	BA38	Postmortem Cerebral Cortex	26	17	Click here
hart 7. Exp	pression Signa	atures of A	ASD Risk	Gene in Broo	lmann Area (B	BA)20/37				
ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical region	Organ	Number (BA20/3	of Samples 7)	Experimen Details
								ASD	Control	
LAS1L	Suggestive Evidence	0.0837	0.729	Up- regulation	Idiopathic ASD vs Control	BA20/37	Postmortem Cerebral Cortex	22	26	Click here
hart 8. Exp	ression Signa	tures of A	ASD Risk	Gene in Broo	lmann Area (E	BA)41/42/22				
ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample (BA41/	s	Experimen Details
								ASD	Control	
LAS1L	Suggestive Evidence	0.0214	0.859	Up- regulation	Idiopathic ASD vs Control	BA41/42/22	Postmortem Cerebral Cortex	40	33	Click here
hart 9. Exi	ression Signa	atures of A	ASD Risk	Gene in Broo	lmann Area (B	BA)3/1/2/5				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample (BA3/1,	s	Experimer Details
								ASD	Control	
LAS1L	Suggestive Evidence	-0.0419	0.781	Down- regulation	Idiopathic ASD vs Control	BA3/1/2/5	Postmortem Cerebral Cortex	30	23	Click here
hart 10. E	xpression Sig	natures of	f ASD Ris	k Gene in Bro	odmann Area	(BA)7				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample		Experimen Details
								ASD	Control	
LAS1L	Suggestive Evidence	-0.0972	0.329	Down- regulation	Idiopathic ASD vs Control	ВА7	Postmortem Cerebral Cortex	35	29	Click here
hart 11. E	xpression Sig	natures o	f ASD Ris	k Gene in Bro	odmann Area	(BA)39/40				
ASD Risk Gene	SFARI Gene Score	Log ₂ FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA39/40)	Experimen Details
						negion		ASD	Control	
LAS1L	Suggestive Evidence	-0.0939	0.427	Down- regulation	Idiopathic ASD vs Control	BA39/40	Postmortem Cerebral Cortex	31	32	Click here
hart 12. Ex	cpression Sign	natures of	ASD Risl	c Gene in Bro	dmann Area ((BA)17				
ASD Risk Gene	SFARI Gene Score	Log₂FC	FDR	Expression Pattern	Comparison Group	Comparing Cortical Region	Organ	Numbe Sample	r of s (BA17)	Experimer Details
						пери		ASD	Control	
LAS1L	Suggestive	-0.0054	0.97	Down-	Idiopathic	BA17	Postmortem	28	28	Click here

ASD vs

Control

Cerebral

Cortex

regulation

Evidence

Chart 1. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Organ Type:

Whole Cortex

Number of Subjects/Samples:

- i. Idiopathic ASD Individuals (Cortex): 49
- ii. Neurotypical Controls (Cortex): 54

Sample Characteristics:

- i. ASD Cortex: Frontal, Temporal, Parietal and Occipital Lobes
- ii. Control Cortex: Frontal, Temporal, Parietal and Occipital Lobes

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 2. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 9 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 9 (Idiopathic ASD): 41
- ii. Brodmann Area 9 (Control): 45

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 9 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 9 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 3. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 44/45 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 44/45 (Idiopathic ASD): 27
- ii. Brodmann Area 44/45 (Control): 19

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 44/45 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 44/45 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532539.

Chart 4. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 24 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 24 (Idiopathic ASD): 30
- ii. Brodmann Area 24 (Control): 18

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 24 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 24 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 5. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 4/6 (Frontal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 4/6 (Idiopathic ASD): 28
- ii. Brodmann Area 4/6 (Control): 27

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 4/6 of Frontal Lobe
- ii. Control Cortex: Brodmann Area 4/6 of Frontal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 6. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 38 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 38 (Idiopathic ASD): 26
- ii. Brodmann Area 38 (Control): 17

Sample Characteristics:

- i. ASD Cortex : Brodmann Area 38 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 38 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 7. Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 20/37 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 20/37 (Idiopathic ASD): 22
- ii. Brodmann Area 20/37 (Control): 26

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 20/37 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 20/37 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 8. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical region:

Brodmann Area 41/42/22 (Temporal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 41/42/22 (Idiopathic ASD): 40
- ii. Brodmann Area 41/42/22 (Control): 33

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 41/42/22 of Temporal Lobe
- ii. Control Cortex: Brodmann Area 41/42/22 of Temporal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Chart 9. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 3/1/2/5 (Parietal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 3/1/2/5 (Idiopathic ASD): 30
- ii. Brodmann Area 3/1/2/5 (Control): 23

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 3/1/2/5 of Parieta Lobe
- ii. Control Cortex: Brodmann Area 3/1/2/5 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 10. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical region:

Brodmann Area 7 (Parietal Lobe)

Number of Subjects/Samples:

- Brodmann Area 7 (Idiopathic ASD): 35
- Brodmann Area 7 (Control): 29

Sample Characteristics:

- i. Idiopathic ASD Cortex : Brodmann Area 7 of Parietal Lobe
- ii. Neurotypical Control: Brodmann Area 7 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

Reference:

Chart 11. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 39/40 (Parietal Lobe)

Number of Subjects/Samples:

- i. Brodmann Area 39/40 (Idiopathic ASD): 31
- ii. Brodmann Area 39/40 o(Control): 32

Sample Characteristics:

- i. ASD Cortex: Brodmann Area 39/40 of Parietal Lobe
- ii. Control Cortex: Brodmann Area 39/40 of Parietal Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References

Gandal MJ, Haney JR, Wamsley B, et al. Broad transcriptomic dysregulation occurs across the cerebral cortex in ASD. Nature. 2022;611(7936):532-539.

Chart 12. Experiment Summary

Experiment Details

Clinical Manifestation:

Idiopathic ASD and Neurotypical Control

Comparison Group:

Idiopathic ASD Individuals vs Neurotypical Controls

Organ:

Postmortem Cerebral Cortex

Comparing Cortical Region:

Brodmann Area 17 (Occipital Lobe)

Number of Subjects/Samples:

- Brodmann Area 17 of (Idiopathic ASD): 28
- ii. Brodmann Area 17 of (Control): 28

Sample Characteristics:

- i. Idiopathic ASD Cortex: Brodmann Area 17 of Occipital Lobe
- ii. Neurotypical Control: Brodmann Area 17 of Occipital Lobe

Data Type:

RNA-seq

Gene Expression:

mRNA/Non-coding RNA

Species:

Human

Experiment Name:

Broad Transcriptomic Dysregulation Occurs Across the Cerebral Cortex in ASD

References