

Supplemental Data

Molecular Cytogenetic Analysis and Resequencing

of Contactin Associated Protein-Like 2

in Autism Spectrum Disorders

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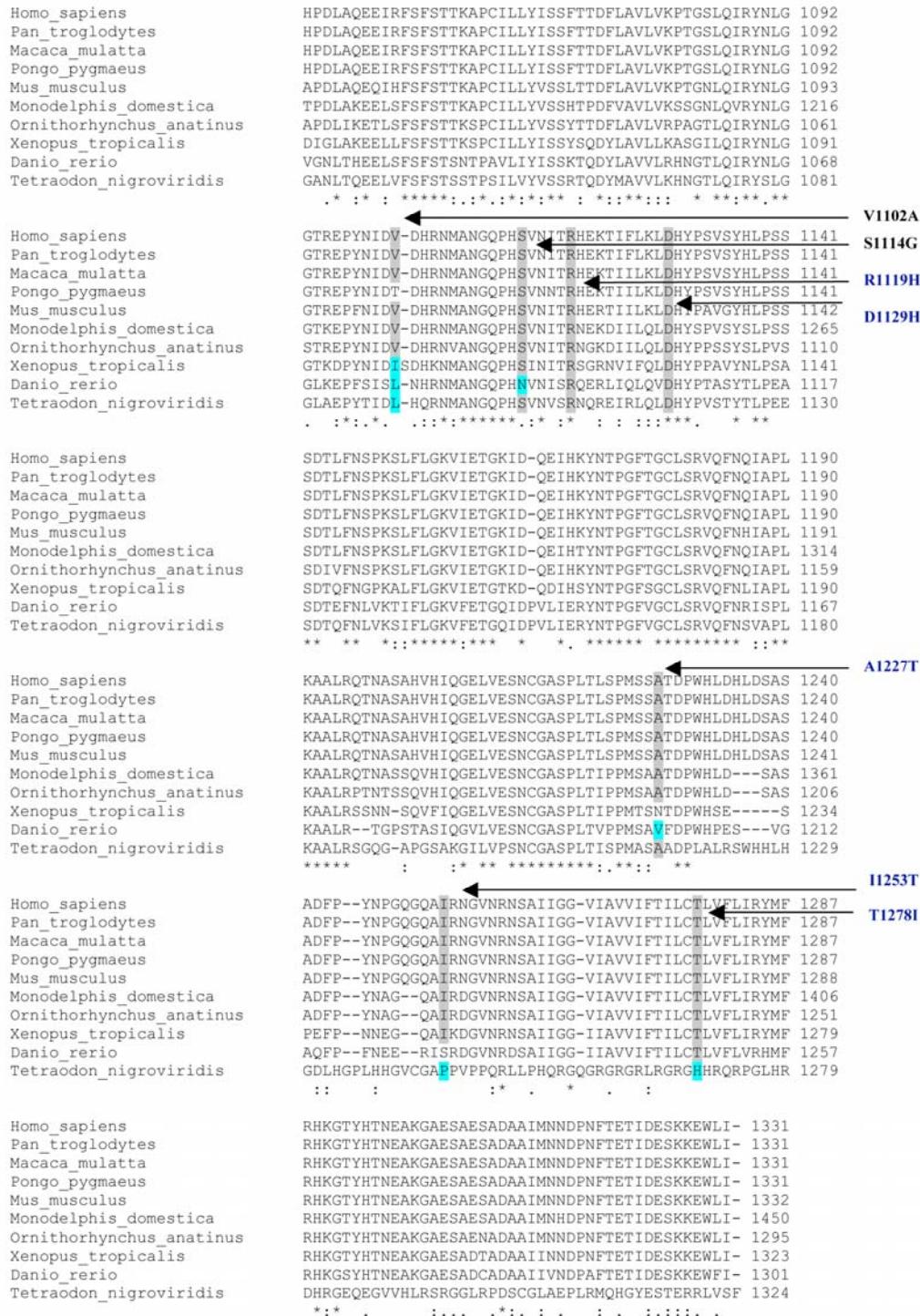
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Homo_sapiens	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Pan_troglodytes	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Macaca_mulatta	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Pongo_pygmaeus	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Mus_musculus	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Monodelphis_domestica	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Ornithorhynchus_anatinus	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Xenopus_tropicalis	VGDTDRQGSEAKLSVGPLRCQGD-----	794
Danio rerio	VGDTFRSSSEAKLSEPLRCHGD-----	793
Tetraodon nigroviridis	VGDIYRGSGSEAKLTVGPLRCQGD-----	772
*** * .*****: * :***:***		
Homo_sapiens	VGDNRRGSGSEAKLTVGSLCRGDCECPENPPSFGVAFAKVHPCPVSP	783
Pan_troglodytes		
Macaca_mulatta		
Pongo_pygmaeus		
Mus_musculus		
Monodelphis_domestica		
Ornithorhynchus_anatinus		
Xenopus_tropicalis		
Danio rerio		
Tetraodon nigroviridis		
***** * .*****: * :***:***		
Homo_sapiens	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLTPWGVLLENMGKE	843
Pan_troglodytes	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLTPWGVLLENMGKE	843
Macaca_mulatta	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLTPWGVLLENMGKE	843
Pongo_pygmaeus	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLTPWGVLLENMGKE	843
Mus_musculus	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLIPRGVFLENLGN	843
Monodelphis_domestica	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTLIPRGVFLENLGN	843
Ornithorhynchus_anatinus	-RNYWNAASFNPNSYLHFSTFQGETSADISFYFKTSAADGVFLENLGN	969
Xenopus_tropicalis	-QNYWNAASFPTPSSYLYFSTFQGETSADISFYFKTSAADGVFLENLGN	812
Danio rerio	-KQYWNAASFPTPSSYLYFSTFQGETSADISFYFKTSASDPGVFLENRKG	842
Tetraodon nigroviridis	-RHYWNAASFNTPASYLHFPTLQAETSADVSFYFKTSASHGVFLENLGNP	821
VGFWNAASFSSPASYLHFASFRGETSTDISFYFKTSSTHGVLLENGLN		
***** * .*****: * :***:***		
Homo_sapiens	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPTPLNDDQWHRVTAEERNVKQ	893
Pan_troglodytes	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPTPLNDDQWHRVTAEERNVKQ	893
Macaca_mulatta	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPTPLNDDQWHRVTAEERNVKQ	893
Pongo_pygmaeus	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPTPLNDDQWHRVTAEERNVKQ	893
Mus_musculus	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPSPLNDDQWHRVTAEERNVKQ	101
Monodelphis_domestica	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPSPLNDDQWHRVTAEERNVKQ	862
Ornithorhynchus_anatinus	DFIKLELKSAVEVSFSFDVGNGPVEIVVRSPNTPLNDDQWHRVTAEERNVKQ	892
Xenopus_tropicalis	DFIKLELKSNTEVSFAFDVGNGPVEIVVRSPSPLNDDQWHRVRVAERNVK	892
Danio rerio	DFLRLELSSASVVSFSFDVGNGLVEIVSRSSTPLNDDQWHRVEAERNIKE	871
Tetraodon nigroviridis	DLLHIELKGSSVPSFSDRDERVEIVSRSPQLNLDNDKKHRVEVEKNIQE	883
***** * .*****: * :***:***		
Homo_sapiens	ASLQVDRLPQQIRKAPTEGHTRLELYSQLFVGGAGGQQQFLGCIRSRLMN	943
Pan_troglodytes	ASLQVDRLPQQIRKAPTEGHTRLELYSQLFVGGAGGQQQFLGCIRSRLMN	943
Macaca_mulatta	ASLQVDRLPQQIRKAPTEGHTRLELYSQLFVGGAGGQQQFLGCIRSRLMN	943
Pongo_pygmaeus	ASLQVDRLPQQIRKAPTEGHTRLELYSQLFVGGAGGQQQFLGCIRSRLMN	943
Mus_musculus	ASLQVDRLPQQIRKAPTEGHTRLELYSQLFVGGAGGQQQFLGCIRSRLMN	943
Monodelphis_domestica	ASLQVDQLPQQVRKAPTEGHTRLELYSQLVLYGAAGGQRGFLGCIRSRLMN	106
Ornithorhynchus_anatinus	ASLQVDQLPQQVRKAPTEGHTRLELYSQLVLYGAAGGQRGFLGCIRSRLMN	912
Xenopus_tropicalis	ASLQVDQLPWPQIKAFTQGHTRLELYSQLFVGVAAGDQRGFLGCIRSRLMN	942
Danio rerio	AVLRVDKLREYARSAPPQGHTRQLFLSQFLGVASGSQQRGFLGCIRSLKVN	921
Tetraodon nigroviridis	AALQLDQGYREVRPASPQGRKTLFEYSLDVYLGASSQRGFLGCIRSLKIN	933
***** * .*****: * :***:***		
Homo_sapiens	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Pan_troglodytes	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Macaca_mulatta	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Pongo_pygmaeus	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Mus_musculus	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Monodelphis_domestica	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Ornithorhynchus_anatinus	GVTLDLEERAKVTSGFISGCGSHCTSYGTCENGKCLERYHGSCDCS	993
Xenopus_tropicalis	GVTLDLEERAKVTLGVPKGCGSHCTSGYMCENGKCKVEKYNGYSCDCSK	111
Danio rerio	GVTLDLEERAKVTLGVPKGCGSHCTSGYMCENGQCCKVEKYNGYSCDCSK	962
Tetraodon nigroviridis	GMTLDEERAKITPGVKGCGSHCTSFGMYCQNGGCKVEKYNGYTCDCSR	992
GVTLDLEGRARVTGVKGCGSHCSYGMHCQNGGCKIEKYNGYSCDCSQ		
GVTFLNLKAAKATSPGVSPGCQGHCSSYGTGTHCRNGGTCVEKYNGYSCDCS		
***** * .*****: * :***:***		
Homo_sapiens	TAYDGTFCNKDVGAFFEEGMWLRYNFQAPATNARDSSSRVDNAPDQQ-NS	104
Pan_troglodytes	TAYDGTFCNKDVGAFFEEGMWLRYNFQAPATNARDSSSRVDNAPDQQ-NS	104
Macaca_mulatta	TAYDGTFCNKDVGAFFEEGMWLRYNFQAPATNARDSSSRVDNAPDQQ-NS	104
Pongo_pygmaeus	TAYDGTFCNKDVGAFFEEGMWLRYNFQAPATNARDSSSRVDNAPDQQ-NS	104
Mus_musculus	TAYDGTFCNKDVGAFFEEGMWLRYNFQAPAVTARDTGSRAENSADQQQHL	104
Monodelphis_domestica	TAYDGPFCNKDVGAFFEEGMWLRYNFQAP--GTDKGASRSRSGNSVDSQ-NL	116
Ornithorhynchus_anatinus	TAYDGPFCIKDVGAFFEEGMWLRYNFQAP--GTDKGASRSRSGNSVDSQ-NL	104
Xenopus_tropicalis	TAYDGPFCNKDVGAFFEEGMWLRYNFQSPVASSSSPSRTGNNSA_PQ-NA	104
Danio rerio	TAYDGPFCNKDVGAFFEEGMWLRYNFQSPVASSSSPSRTGNNSA_PQ-NA	104
Tetraodon nigroviridis	TAFDGPFCNDDVGGYFESGTLVRFDLMSSESSTSSPALKE-GESAVLG-II	101
TAYDGAFCTEDVGYYFETGTLVRYDFPPEANFALPETKSQAGVGLL--H		
***** * .*****: * :***:***		

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**Figure S1.** Diagram Showing ClustalW Alignment of Top BlastP Hits to *CNTNAP2*

Unique variants identified in the case (dark blue) and control groups (black) are highlighted. Amino acids marked with gray are identical to human sequence. Those marked in light blue fall into the same broad physio-chemical group. Red indicates that the amino acid was the same as the change caused by the rare variant. An asterisk (*) identifies residues or nucleotides that are identical in all sequences in the

alignment. A colon (:) designates conserved substitutions. A period (.) denotes semiconserved substitutions. *Homo sapiens*, NP_054860.1; *Pan troglodytes*, XP_519462.2; *Macaca mulatta*, XP_001094652.1 ; *Pongo pygmaeus*, Q5RD64; *Mus musculus*, NP_001004357.1; *Monodelphis domestica*, XP_001368218.1 ; *Ornithorhynchus anatinus*, XP_001505555.1; *Xenopus tropicalis*, NP_001072732.1; *Danio rerio*, XP_691801.2; *Tetraodon nigroviridis*, CAG11627.1.