

Single Mutant Mice Relevant to A-T Research

*Not a comprehensive list

Updated March, 2016

Genotype	References
PIKK family members	
Atm +/- (heterozygote)	Barlow, C et al., Cell 1996 86 :159-171 Barlow, C et al., Nat Genet 1999 21 :359-360 Worgul, BV et al., PNAS 2002 99 :9836-9 Weil, MM et al., Oncogene 2001 20 : 4409-4411
Atm -/- (homozygous knockout)	<i>Borghesani, PR et al., PNAS 2000 97:3336-3341</i> Eilam, R et al., PNAS 1998 95 :12653-12656 Xu, Y et al., Genes Dev 1996 10 :2401-2410 Barlow, C et al., Development 1998 125 :4007-4017 <i>Barlow, C et al., Cell 1996 86:159-171</i> Elson, A et al., PNAS 1996 93 :13084-13089 Xu, Y et al., Genes Dev 1996 10 :2411-2422 Hishiya, A et al., Bone 2005 37 :497-503 Lu, S et al., Hum Mol Genet 2005 14 :3019-25 Rasheed, N et al., Hum Mol Genet 2006 15 :1938-48 Morita, K et al., J Exp Med 2007 204 :1613-23 <i>Campbell, A et al. Hum Mol Genet 2015 24: 6331-49</i>
Atm(KD/KD) (homozygous kinase dead)	Yamamoto, K et al., J Cell Biol 2012 198 :305-13 Daniel, JA et al., J Cell Biol 2012 198 :295-304
Atm +/-deltaSRI	Spring, K et al., Cancer Res 2001 61 :4561-8 Spring, K et al., Nat Genet 2002 32 :185-90 Lavin, MF and Spring, K, Toxicology 2002 181/2 :483-9
ATR +/-	Brown, EJ and Baltimore D, Genes Dev 2000 14 :397-402 de Klein, A et al., Curr Biol 2000 10 :479-82
ATR -/-	Brown, EJ and Baltimore D, Genes Dev 2000 14 :397-402 de Klein, A et al., Curr Biol 2000 10 :479-82
ATR^{mkO}	Ruzankina, Y, Cell Stem Cell 2007 1 :113-126
DNA-PKcs -/-	Taccioli, GE et al., Immunity 1998 9 :355-66 Gao, Y et al., Immunity 1998 9 :367-76
DNA-PKcs(KD/KD) (homozygous kinase dead)	Jiang, W et al., Mol Cell 2015 58 :172-85
Smg1 gt/gt (knockout) Smg1 +/-gt (het)	Roberts, TL et al., PNAS 2012 110 :E285-94
ATM interacting protein	
Atmin(Δ/Δ)	Kanu, N et al., J Biol Chem 2010 285 : 38534-42
Atmin(ΔN)	Kanu, N et al., J Biol Chem 2010 285 : 38534-42
MRN proteins	
Mre11 -/-	Xiao, Y and Weaver, DT, Nucleic Acids Res 1997 25 :2985-91
Mre11(ATLD1/ATLD1)	Theunissen, JW et al., Mol Cell 2003 12 :1511-23
Rad50(S/S)	Bender, CF et al., Genes Dev 2002 16 :2237-51 Morales, M et al., Genes Dev 2005 19 :3043-54
Nbs1 -/-	Zhu, J et al., Curr Biol 2001 11 :105-109
Nbn-CNS-del	Frappart, PO et al., Nat Med 2005 11 : 538-44
Other DNA repair proteins	
H2AX -/-	Celeste, A et al., Science 2002 296 :922-7
Mlh1 -/-	Baker, SM et al., Nat Genet 1996 13 :336-42 Ziv et al., manuscript submitted
Rad54 -/-	Essers, J et al., Cell 1997 89 :195-204
Lig4 -/-	Lee, Y et al., Genes Dev 2000 14 :2576-80
Parp-1 -/-	Wang, ZQ et al., Genes Dev 1995 9 :509-20 de Murcia, JM et al., PNAS 1997 94 :7303-7 Masutani, M et al., Mol Cell Biochem 1999 193 :149-52 Eliasson, MJ et al., Nat Med 1997 3 :1089-95
Parp-2 -/-	J. Ménissier-de Murcia, unpublished
Rnf168 -/-	Bohgaki, T et al., PLoS Genet 2011 7 (4);e1001381
Tdp1 -/-	Katyal, S et al., EMBO J 2007 26 :4720-31
Other proteins	
Harlequin Pdcd8^{Hq}	For detailed phenotype information please visit The Jackson Laboratory website(www.jax.org) (stock number: 000501) Klein, JA et al., Nature 2002 419 :367-374