

Supplementary Table-S1

Supplementary Table-S1: List of primers used.										
Primers fo construction of cDNA library										
SMART III Oligo		5'-AAGCAGTGGTATCAACGCAGAGTGGCCATTATGGCCGGG-3'								
CDSIII primer		5'-ATTCTAGAGGCCGAGGCGGCCGACATG-d (T) 30 VN-3'								
CDSIII/6 primer		5'-ATTCTAGAGGCCGAGGCGGCCGACATG-NNNNNN-3'								
Primers for cDNA library amplification										
5'-PCR Primer		5'-TTCCACCCAAGCAGTGGTATCAACGCAGAGTGG-3'								
3'-PCR Primer		5'-GTATCGATGCCCCACCCTCTAGAGGCCGAGGGCGGCCGACA-3'								
Primers for cDNA of Prkar1α (Underlined: Ned1 and BamHI sites)										
X144F		5'-GGAATTCCATATGATGGCGTCTGGCAGTATGGC-3'								
X144R		5'-CGGGATCCTCAGACGGACAGGGACACGAAGC-3'								
Primers for identification of plasmids in yeast										
5'-AD LD insert primer		5'-CTATTGATGATGAAGATACCCCAACAAACCC-3'								
3'AD LD insert primer		5'-GTGAACTTGCGGGGTTTTTCAGTATCTACGATT-3'								
Primers for PCR of partial cDNAs for homologous recombination in yeast										
5'-LD insert primer		5'-GGAGTACCCATACGAGCTACC-3'								
3'-LD insert primer		5'-TATCTACGATTCACTGTCAGC-3'								
Primers for RT-PCR of full-length cDNAs (Underlined: homologous arms for recombination in yeast)										
Vdac2 (888 bp)										
X5F		5'-ACGACGTACCAGATTACGCTATGGCTGAGTGCTGTGTACCGGT-3'								
X5R		5'-TATCTACGATTCACTGCAAGTTAAGCCTCCAATCCAAG-3'								
Mzt12 (480 bp)										
X12F		5'-ACGACGTACCAGATTACGCTATGGCGCGCGCGCGGCTGCTGCT-3'								
X12R		5'-TATCTACGATTCACTGCAAGTTATGGCTGCTTCGGGAGTTGCTT-3'								
Clba1 (966 bp)										
X14F		5'-ACGACGTACCAGATTACGCTATGCAAGCGGGCAGGAGGT-3'								
X14R		5'-TATCTACGATTCACTGCAAGTTAGCAGACATCATTATTAAGAAT-3'								
Oaz3 (733 bp)										
X15F		5'-ACGACGTACCAGATTACGCTCTGCCTTGTAACAGGTCCCGC-3'								
X15R		5'-TATCTACGATTCACTGCAAGTCACTGGCCAGGGTGGC-3'								
Spat24 (588 bp)										
X20F		5'-ACGACGTACCAGATTACGCTATGGCGACGCCCTTG-3'								
X20R		5'-TATCTACGATTCACTGCAAGTCAATTCGTGACCTGCCT-3'								
Actg1 (733 bp)										
X23F		5'-ACGACGTACCAGATTACGCTATGTTTGAACCTTCAATACCCAG-3'								
X23R		5'-TATCTACGATTCACTGCAAGCTAGAAGCATTTCCGGTGGACG-3'								
Ankef1 (2328 bp)										
X31F		5'-ACGACGTACCAGATTACGCTATGGCTTTGGCAGACAAGAGACT-3'								
X31R		5'-TATCTACGATTCACTGCAAGTTAGTTCTTGAGTGTTCCTCCAGT-3'								
Ppp1r42 (1074 bp)										
X34F		5'-ACGACGTACCAGATTACGCTATGGTTCGACTGACGGTGGAT-3'								
X34R		5'-TATCTACGATTCACTGCAAGTTACTCCTTTTTCTCAGAC-3'								
Spat3 (513 bp)										
X35F		5'-ACGACGTACCAGATTACGCTATGAAGAAGGTCAAAAAGAAAAAGT-3'								
X35R		5'-TATCTACGATTCACTGCAAGCTACACCAAGGCTTTTAGC-3'								
Odf1 (747 bp)										
X38F		5'-ACGACGTACCAGATTACGCTATGGCCGCACTGAGTTGTCT-3'								
X38R		5'-TATCTACGATTCACTGCAAGTTATAAGATCATCTTCCTACAG-3'								
Morn2 (240 bp)										
X51F		5'-ACGACGTACCAGATTACGCTATGAATGGCTTTGGAAGACTTG-3'								
X51R		5'-TATCTACGATTCACTGCAAGCTACATGTAGAGCTTTAGTTTCAGG-3'								
Atp1b3 (843 bp)										
X46F		5'-ACGACGTACCAGATTACGCTACGAAGACTGAGAAAAATCCT-3'								
X46R		5'-TATCTACGATTAATCTGCAAGGCTCGTGTGTGACTTTGAAC-3'								
Primers for RT-PCR of partial cDNAs encoding N- and C-terminal MENA fragments										
Mena-1-F		5'-ACGACGTACCAGATTACGCTAGTGAACAGAGTATCTGTCAGGC-3'								
Mena-1-R		5'-TATCTACGATTCACTGCAAGTCTGCGCTCTCGCTCCCACTC-3'								
Mena-2-F		5'-ACGACGTACCAGATTACGCTGCATCTGGAATTTTCTCTGGATC-3'								
Mena-2-R		5'-TATCTACGATACATCTGCAAGTGCAGTGTTCAGTCTGCTCAGC-3'								

Supplementary Table-S2

Supplementary Table-S2: List of genes identified to interact with PKA-R1a.							
Gene Symbol	Gene Name	NCBI Accession Number	Protein ID	Protein Length	cDNA clone in pGADT7	Polypeptide encoded	Fncional Roles
Actg1	Actin, gamma, cytoplasmic 1	NM_009609.3	NP_033739.1	375 aa	Full-length/Partial	aa224-375	Ubiquitous Actin cytoskeletal component
Adam32	A disintegrin and metallopeptidase domain 32	NM_153397.2	NP_700446.2	754 aa	Partial	aa644-754	Testis-specific Sperm development and fertilization
Ankf1	Ankyrin repeat and EF-hand domain containing 1	NM_175667.4	NP_783598.1	775 aa	Full-length	aa1-754	Testis-specific Enriched in ciliated tissue and cells, testis
Atp1b3	ATPase, Na+/K+ transporting, beta 3 polypeptide	NM_007502.5	NP_031528.1	276 aa	Full-length	aa1-700	Testis-enriched Nociceptive sensitivity
BC051142	Testis-expressed basic protein 1 isoform 1	NM_001001177.2	NP_001001177	393 aa	Partial	aa223-363	Testis-specific N/A
Ciba1	Clathrin binding box of aftriphilin containing 1	NM_145450.3	NP_663425.2	321 aa	Full-length	aa1-321	Testis-enriched N/A
Dnaja4	DnaJ heat shock protein family (Hsp40) member A4	NM_001357875.1	NP_001344804.1	462 aa	Partial	aa199-426	Testis-enriched Cholesterol synthesis
Dnaja4	DnaJ heat shock protein family (Hsp40) member C4	NM_001356999.1	NP_001343928.1	261 aa	Partial	aa17-261	Testis-enriched N/A
Dync1h1	Dynein cytoplasmic 1 heavy chain 1	NM_030238.2	NP_084514.2	4644 aa	Partial	aa4501-4644	Ubiquitous Retrograde transport, dendritic morphology,
Mena	Mammalian ENA/VASP actin regulator (Enah) homolog, transcript variant 4	NM_001083121.2	NP_001076590	541 aa	Partial, partial	aa1-253, aa344-541	Ubiquitous Actin cytoskeleton remodeling and cell polarity
Ing1	Inhibitor of growth family, member 1	NM_011919.5	NP_036049.2	279 aa	Partial	N/A	Ubiquitous Inhibits p53-dependent transcription activation
Mett16	Methyltransferase like 16	NM_026197.3	NP_080473.1	553 aa	Partial	aa468-553	Ubiquitous Methylates N6-adenosine of mRNAs and U6 snRNAs
Morn2	MORN repeat containing 2	NM_001360440.1	NP_001347369.1	79 aa	Full-length	aa1-79	Testis-specific Membrane occupation and recognition nexus repeat-containing-2
Mzt2	Mitotic spindle organizing protein 2	NM_001359003.1	NP_001345932.1	159 aa	Full-length	aa1-159	Testis-enriched Gamma-tubulin ring complex associated Mozart2 family member
Oaz3	Ornithine decarboxylase antizyme 3	NM_016901.3	NP_058597.2	243 aa	Full-length	aa1-243	Testis-specific Inhibits ornithine decarboxylase (ODC) sperm connecting piece development
Odf1	Outer dense fiber of sperm tails 1	NM_008757.3	NP_032783.2	248 aa	Full-length	aa1-248	Testis-specific HSPB10, mitochondrial sheath and ODF organization, head-tail linkage, motility
Picd4	Phospholipase C, delta 4	NM_001081456.1	NP_001074925.1	775 aa	Partial	aa597-775	Testis-specific Hydrolyzes PIP2 to generate DAG and IP3, acrosome reaction
Ppp1r42	Protein phosphatase 1, regulatory subunit 42	NM_145692.2	NP_663730.1	357 aa	Full-length/Partial	aa1-357	Testis-specific Positively regulates protein phosphatase 1 (PP1) in the testis, centrosome dynamics
Prmt7	Protein arginine N-methyltransferase 7	NM_145404.1	NP_663379.1	692 aa	Partial	aa598-692	Testis-enriched catalyzes ω-monomethylarginine and symmetric-dimethylarginine formation
Rps15a	Ribosomal protein S15A	NM_170669.2	NP_733769.1	130 aa	Partial	aa86-130	Ubiquitous uRPS8, component of ribosomal small subunit, positively regulate cell proliferation
Smcp	Sperm mitochondria-associated cysteine-rich protein	NM_008574.4	NP_032600.3	143 aa	Partial	aa120-143	Testis-specific Mitochondrial capsule associated, motility regulation
Spata21	Spermatogenesis associated 21	NM_177867.3	NP_808535.1	681 aa	Partial	aa621-681	Testis-specific EF hand containing, may be involved in differentiation of haploid spermatids
Spata24	Spermatogenesis associated 24	NM_027733.5	NP_082009.3	185 aa	Full-length/Partial	aa1-155	Testis-specific DNA binding, may be involved in cytoplasm movement and removal during spermiogenesis
Spata3	Spermatogenesis associated 3	NM_027300.3	NP_081576.2	193 aa	Full-length/Partial	aa1-159	Testis-specific N/A
Tulp2	Tubby-like protein 2	NM_008807.3	NP_032833.2	562 aa	Partial	aa398-562	Testis-specific C-terminal TUB domain, stress response, TF, PI binding, GPCR and Shh signaling
Ubc	Ubiquitin C	NM_019639.4	NP_062613.3	734 aa	Partial	aa649-734	Ubiquitous Protein ubiquitilation
Vdac2	Voltage-dependent anion channel 2	NM_011695.2	NP_035825.1	295 aa	Full-length	aa1-295	Testis-enriched Outer mitochondrial membrane ion channel, has both anion and cation seletivity