



Supplementary Figure 1: The cellular development and cell motility functions associated network identified by IPA network generation algorithm (a). The proteins marked in “blue” are the ones from our dataset while the remaining ones in “black” are the proteins in the Ingenuity Knowledge Base (IKB) that interact with ours. The nine proteins in blue show increasing trends expression during spermatozoa maturation process. ACR: acrosin; AKAP3: a kinase anchor protein 3; AKAP4: a kinase anchor protein 3; ALAT: dihydroliipoamids S-acetyltransferase; PDHA2: pyruvate dehydrogenase (liipoamide) alpha 2; PRSS12: protease, serine, 12; SLC 25A3: solute carrier family 25 (mitochondrial carrier; phosphate carrier), member 3; APAG6: sperm associated antigen 6; SPAG 16: sperm associated antigen 16. (b) Molecular transport and cellular assembly functions the seven proteins in blue showed significant decreasing trends in spermatozoa maturation. CSE1L: CSE1 chromosome segregation 1-like; PRDX1: peroxiredoxin 1; PRDX2: peroxiredoxin 2; PRDX4: peroxiredoxin 4; RANBP1: RAN binding protein 1; XPO1: exportin 1; KPNB1: karyopherin (importin) beta 1.