

Supplement Table 1

Supplement Table 1 Number of DEGs and parts of DEGs related to reproduction

Grouping	Number of up-regulated DEGs	Number of down-regulated DEGs	Parts of DEGs related to reproduction
LM1 vs M2	3542	2944	<i>STAR, 3BHSD, CYP11A1, EGFR, ADCY5, AKT3, LDLR, PIK3R1</i> and <i>MAPK12</i> , and so on.
C1 vs C2	930	608	<i>STAR, LDLR, PIK3R1, ADCY5, BMP15, FSHR</i> , and <i>CYP17A1</i> and so on.

Supplement Figure 1

Supplement Figure 1 The CDs sequence and the encoded protein sequence of *ADCY5*

1	ATGTCCAGCTCCAAAAGCGTGAAGCCCCCGGGCTACGGCGCGAGACAGCGGCGGCGCGGGCTCCGCGGGGAGGCCGGAACACCGCTCC	1981	AGAAOCAACTCCATCGGGCACAACCGGCTCACTGGGGGCGGAGCGCCCTTCATAAOCAAACCTGGGTGGCAACAGGTTGCAGGAG
	M S S S K S V S P P G Y A A Q T A A A P A S R G G G P E H R S		R T N S I G H N P P H W G A E R P F Y N H L G G N Q V S K E
91	GGCTGGGGAGAGGCGGACTCCCGGCCAAATGGCTACCCCAAGCCCCGGGGTTGGGCGCGGCTCCACCAAGAGACCTGGGGGGGG	2071	ATGAAGCGGATGGGCTTTGAAGACCCCAAGGACAAGAATGCCCAGGAAAGTCGAACCTGAGGATGAAGTGGATGAATTTCTGGGGCGT
	A W G E A D S R A N G Y P Q A P G G S A R G S T K R P G G A		M K R M G F E D P K D K N A Q E S S N P E D E V D E F L G R
181	GTGACCCGCGAGCAGACACAGGGCTGGCCAGCCGCTGGGCGAGGACGACGAGACGATCCTCGCTGAGTGGCGATGACCCCCCTGGCC	2161	GCCATTGATGCCAGGAGCATGACAGGCTGCGATCGGACATGTGCGCAAGTTCCCTCTGACCTTCAGGGAGCCTGACTTAGAGAGAAG
	V T P Q Q Q Q R L A S R W R S D D E D D P P L S G D D P L A		A I D A R S I D R L R S E H V R K F L L T F R E P D L E K K
271	GGGGGCTTGGGCTTCAGCTTCGTTCCGTTCCAGTGGCGCTGGCAGGAGCGCGGCGGGCAGCAGCTGCGGTGCGGGCAGCGGGGCGAGCGCGG	2251	TACTCCAAGCAAGTGATGACCGATTGGTGCCCTACGTGGCCCTGGCCGTGCTGCTCTCTCTCATCTGCTTTGTCCAGATCAOCTC
	G G F G F S F R S K S A W Q E R G G D D C G R G S R R Q R R		Y S K Q V D D R F G A Y V A C A S L V F L F I C F V Q I T V
361	GGCGCGCGGCGGGGCGACACCCGGGCGCCCTCGGGCGAGCGCGCGGCTTGGCGGGCTGGCGCGCGCGAGCGGAGGAACCGAG	2341	GTGGCCCACTCCGTGTTGATGTTGAGTTTCTACCTGACCTGTTTCCTGCTGCTGACCTTGAGTGTGTTTGTCGCTGATCTATTCTTGC
	G A A G G G S T R A P P A G S G G G S A A A A A A A G G T E		V P H S V F M L S F Y L T C F L L L T L V V F V S V I Y S C
451	GTGGGCCCCGTTGGGTGAAGCTAGGGCTGGAGAGCGGGCTGGCAGGGCGCGCGCGGAAGATCTGGAGGCGGGCGGCTGGAGGAA	2431	GTGAAGCTCTTCCGGCCCCGCTGCAGACCCCTCTCCAGGAAGATCGTGAGGTCCAAGATGAACAGCACCTAGTGGGGGTGTCAACATC
	V R P R S V E L G L E E R R G K G R A A E D L E A G A V E E		V K L F P A P L Q T L S R K I V R S K M N S T L V G V F T I
541	GACGAAGGCTGGGGATGGGGGAGCTGGGAGGCTCGGGCTGGGGGCTGGGCGGCTGGCTGGCGCGGCTGCTGCCGTGGCAGTG	2521	ACCCTCGTGTCTCTGGGCTTTGTCACATGTTGACGTGCAACTCCAGGACCTGTTGGCTGCCGTGGGGAGCAGCACAACATCAGT
	D E G S G D G G S S A G S G S G P G A V L S L G A C C L A L		T L V F L S A F V N M F T C N S K D L F G C L G D E H N I S
631	CTGAGATATTCCGCTCGAAGAGTTCCCATCGGACAAGCTGGAGCGGCTGTACCAGCGCTACTTCTTCGCTGTAACCAAGAGCAGCTC	2611	GCCAGTCAGGTCAAACGGGTGCCAGTGGGTGAGTCGGCGCTCAACTACAGTCTGGGTGATGAGCAGGGCTTCTGCGCGAGCTCCTGGCCC
	L Q I F R S K K F P S D K L E R L Y Q R Y F F R L N Q S S L		A S Q V N A C H V V E S A V N Y S L G D E Q G F C G S S W P
721	ACGATGCTCATGGCTGTGCTGGTGTGCTGATGATGTTGGCTTCCACGCGCAGCGGCCCGCTGACGCTAGCCCTATCTGGCC	2701	AACGCAACTTCCCGAGTACTTCACCTACAGCGTGCTGCTCAGCCTGCTGGCCTGCTCGTGTCTCGAGATCAGCTGCATCGGGAAAG
	T M L M A V L V L V C L V M L A F H A A R P P L Q L P Y L A		N C N F P E Y F T Y S V L S L L A C S V F L Q I S C I G K
811	GTCTAGGGGCGCGCGTGGGTGATCTCGTTATAGCGGTGCTCTGCAAGCGTGGCGCTTCCACGAGACCATGGGCGCTGGCGTGC	2791	CTGGTGCATGCTGGCCATGAGCTCATCTACGTGCTGCTGGTGAAGTGCCCGGTGTCACACTCTTTGACAACTGGCAGCTCCTGGTC
	V L A A A V G V I L V M A V L C N R A A F H Q D H M G L A C		L V L M L A I E L I Y V L V V E V P G V T L F D N A D L L V
901	TACGGGCTTATCGCGTGGTGTGGCGGCTCCAGGTGGTGGGCTGCTGCTGCCCGAGCGGCGAGTGGCTTCCGAGGGCATCTGGTGGACT	2881	ACGGCCAACGCCATAGACTTCAAACAACAGGGGACCTCCGAGTGGCTGAGCATCCGACCAAGGTGGCGCTGAAAGTGGTGAAGCCCGTC
	Y A L I A V V L A V Q V V G L L L P Q P R S A S E G I W W T		T A N A I D F N N N G T S Q C P E H P T K V A L K V V T P V
991	GTGTTTTTCATCTATACGATCTACAGCTCCTGCGCTGGCATGGGGGTGGGTACTCAGCGGGGTGCTCCTGTCCGGCTCCACCTG	2971	ATCATCTCTGCTCTGCTGCTGGCCCTGACCTGCAAGGCCAGCAGGTGGAGTCCAGCTGGCCGCTGAGCTTCTCTGGAACTTCAGGCC
	V F F I Y T I Y T L L P V R M R A A V L S G V L L S A L H L		I I S V F V L A L Y L H A Q Q V E S T A R L D F L W K L Q A
1081	GCCATGCGGCTGGCGACCAAGGCCGAGGATCAGTTCCTGCTCAAGCAGCTGCTGCTCAATGTCTCATTTTCTCTGACCAACATCGTG	3061	ACAGAGGAGAGGAGAGATGAGGAGCTGCAAGCTTACAACGGCGGCTGCTGCACAATATTCTGGCCAAAGAGGTGGCGCACACTTC
	A I A L R T N A Q D Q F L L K Q L V S N V L I F S C T N I V		T E E K E E M E E L Q A Y N R R L L H N I L P K D V A A H F
1171	GGTGATGTGACCCACTACCGGCTGAGGTCTCGAGAGACAGGGCTTCCAGGAGACCCGGAGTGCATCCAGGCGCGGCTCCACTCGCAG	3151	CTGGCCCGTGAACGCGCAADGACGAGCTCTACTATCAGTCTGGGAGTGGTGGCGCTGATGTTGGCCTCCATCGCAACTTCTCCGAG
	G V O T H Y P A E V S Q R Q A F Q E T R E C I Q A R L H S Q		L A R E R R N D E L Y Y Q S C E C V A V M F A S I A N F S E
1261	CGGGAGAACCGACGACGAGAGCGGCTCCTGCTGTCTGCTTCCCGCTCAGGTTGCCATGGAGATGAAGCTGACATCAACGCCAAACAG	3241	TTCTACGTGGAAGTGGAGGCCAAACAGAGGGCGTGAGTGGCTGCGGGCTGCTCAAGAGATCATGCGAGACTTTGAGAGATCATTAGT
	R E N Q Q Q E R L L L S V L P R H V A M E M K A D I N A K Q		F Y V E L E A N N E G V E C L R L L N E I I A D F D E I I S
1351	GAGGATATGATGTTCCATAAGATTACATCCAGAAACATGACACGTCGAGCTCCTGTTTGGCTGACATCGAGGGTTTCACCAAGCCTGGCA	3331	GAGGACCGGTTTCAGGCACTGGAAAAGATCAAGACCATCGGCAACCTACATGGCGGCTCGGGGCTCAATGACTCCACCTACGACAAG
	E D M M F H K I Y I Q K H D N V S I L F A D I E G F T S L A		E D R F R Q L E K I K T I G S T Y M A A S G L N D S T Y D K
1441	TCCAGTGCAGTGGCCAGAGCTGGTCATGACCTCAATGAGCTCTTCGCGCGCTTCGACAGAAGCTGGCTGGGAGAAATCACTGTTACGT	3421	GTGGGCAAGACCCACATCAAAGCCTGGCGACTTGCCATGAAGTTGATGGACCAATGAAGTACATCAACGAGCACTCTTCAACAAC
	S Q C T A Q E L V M T L N E L F A R F D K L A A E N H C L R		V G K T H I K A L A D F A M K L M D Q M K Y I N E H S F N N
1531	ATTAAGATCCTGGGAGATTGTTATTACTGTGTCTCAGGGCTGCTGAAGCCAGGGCTGAOCACGGCCACTGCTGGTGGAGATGGCGATG	3511	TTCCAGATGAAGATCGGGCTCAATATTGGCCCCGTGGTGGGGGCGTGAATCGGAGGCCGCAAGCCTCAGTACGACATCTGGGGCAATAG
	I K I L G D C Y Y C V S G L P E A R A D H A H C C V E M G M		F Q M K I G L N I G P V V A G V I G A R K P Q Y D I W G N T
1621	GACATGATCGAGGCCATCTCGCTGGTCGGGAGGTCAGAGGTGTGAAGCTGAACATGCAGTGTGGGAATTCAACAGGGGAGGTGCAGCTGC	3601	GTGAAGCTGGGCCAGCGCATGGAACAGACCGGTGTCGGGCAOCSGCTCAAGTACACCAAGACATGTACAGGTTGCTGGCGGCAACAG
	D M I E A I S L V R E V T G V N V N M R V G I H S G R V H C		V N V A S R M D S T G V P D R I Q V T T D M Y Q V L A A N T
1711	GGTGTCTCGGCTCAGGAAGTGGCAGTTGATGTCTGGTCTAACGATGTCAACTGGCCACACCATGGAGGCTGGAGGCAAGCGGGA	3691	TACCAGCTGGAGTCCGCGGCTGGTCAAGGTCAAGGGCAAGGCGAGATGATGACCTACTTCTCTCAACGAGGGGCCCGGCCAGTTAG
	G V L G L R K W Q F D V W S N D V T L A N H M E A G G K A G		Y Q L E C R G V V K V K G K G E M M T Y F L N G G P P P S *
1801	CGCATCCACATCAACAAGGCCACACTCACTACTGAATGGTGACTACGAGGTGGAGCGAGGCTGTGGGGGAGGCGCAACGGCTACCTC		
	R I H I T K A T L N Y L N G D Y E V E P G C G G E R N A Y L		
1891	AAGGAGCACAGTATGAGACCTTCTCATCTGCTGCAACCGAGAAAGCGAAAGAAAGGCGCATGATTGCCAAGATGAACCGCCAG		
	K E H S I E T F L I L R C T Q K R K E E K A M I A K M N R Q		

Supplement Figure 2. The effects of Br-cAMP on the proliferation of GCs and the phosphorylation levels of p38 and CREB.
(A) Effects of Br-cAMP addition on the proliferation of GCs. (B) Phosphorylation levels of CREB and p38 proteins in GCs after Br-cAMP addition. Data are shown as mean $\pm$ SEM for 3 independent replicates. * represents $P < 0.05$; ** represents $P < 0.01$; *** represents $P < 0.001$.

