Supplement for:

Characterization of Acyl-CoA Synthetase Isoforms In Pancreatic Beta Cells: Gene Silencing Shows Participation of ACSL3 and ACSL4 In Insulin Secretion

Israr-ul H. Ansari[a], Melissa J. Longacre[a], Scott W. Stoker[a], Mindy A. Kendrick[a], Lucas M. O'Neill[b], Laura J. Zitur[c], Luis A. Fernandez[c], James M. Ntambi[b], and Michael J. MacDonald[a*]

[a]Childrens Diabetes Center, University of Wisconsin School of Medicine and Public Health, Madison, WI 53706; [b]Department of Biochemistry, University of Wisconsin, Madison, WI 53706; [c]Department of Transplant Research and Development, University of Wisconsin School of Medicine and Public Health, Madison, WI 53705

[*]Address for correspondence and reprints: Michael J. MacDonald at *mjmacdon@wisc.edu*

Supplemental Table 1. Nucleotide sequences of shRNA used in this study.

Human	Oligo name	Sequence
ACSL4 (NM_022977.2)	ACSL4-896-Top	5’ GATCCGTGAATCGCAGAGTGAATATGTGCTTTATTCACTCTGCGATTCACTTTTTGGAAA 3’
	ACSL1-896-bottom	5’ AGCTTTTCCAAAAAGTGAATCGCAGAGTGAATAAAGCACATATTCACTCTGCGATTCACG 3’
	ACSL1-2011-Top	5’ GATCCGCAAGAAGGCGGTTATACATGTGCTTTGTATAACCGCCTTCTTGCTTTTTGGAAA 3’
	ACSL1-2011-bottom	5’ AGCTTTTCCAAAAAGCAAGAAGGCGGTTATACAAAGCACATGTATAACCGCCTTCTTGCG 3’
ACSL3 (NM_004457.3)	ACSL3-1337-Top	5' GATCCTCGGAGTCATGATCTCACATATGTGCTTTATGTGAGATCATGACTCCTTTTTGGAAA_3'
	ACSL3-1337-Bottom	5' AGCTTTTCCAAAAAGGAGTCATGATCTCACATAAAGCACATATGTGAGATCATGACTCCGAG_3'
	ACSL3-1560-Top	5' GATCCTCGGGATACATCCATGTTGAAACTGTGCTTGTTTCAACATGGATGTATCCCTTTTTGGAAA_3'
	ACSL3-1560-Bottom	5’ AGCTTTTCCAAAAAGGGATACATCCATGTTGAAACAAGCACAGTTTCAACATGGATGTATCCCGAG_3’

Rat	Oligo name	Sequence
ACSL1 (NM_012820)	ACSL1-697-Top	5’ GATCCTCGGACTCCTACGACAATGATTGTGCTTATCATTGTCGTAGGAGTCCTTTTTGGAAA 3’
	ACSL1-697-bottom	5’ AGCTTTTCCAAAAAGGACTCCTACGACAATGATAAGCACAATCATTGTCGTAGGAGTCCGAG 3’
	ACSL1-816-Top	5’ GATCCTCGCTGAAGATCTTGCGATAATTGTGCTTATTATCGCAAGATCTTCAGTTTTTTGGAAA 3’
	ACSL1-816-bottom	5’ AGCTTTTCCAAAAAACTGAAGATCTTGCGATAATAAGCACAATTATCGCAAGATCTTCAGCGAG 3’
	ACSL1-1292-Top	5' GATCCTCGGAAAGTCCGGCTGATGATTGTGCTTATCATCAGCCGGACTTTCCTTTTTGGAAA 3'
	ACSL1-1292-bottom	5' AGCTTTTCCAAAAAGGAAAGTCCGGCTGATGATAAGCACAATCATCAGCCGGACTTTCCGAG 3'
ACSL3 (NM_057107.1)	ACSL3-666-Top	5' GATCCTCGGTGACCAACATCATTACTAGTGTGCTTCTAGTAATGATGTTGGTCACCTTTTTGGAAA 3'
	ACSL3-666-Bottom	5' AGCTTTTCCAAAAAGGTGACCAACATCATTACTAGAAGCACACTAGTAATGATGTTGGTCACCGAG 3'
	ACSL3-879-Top	5' GATCCTCGCCCTCAGATATTGCAGTAATTGTGCTTATTACTGCAATATCTGAGGGCTTTTTGGAAA 3'
	ACSL3-879-Bottom	5' AGCTTTTCCAAAAAGCCCTCAGATATTGCAGTAATAAGCACAATTACTGCAATATCTGAGGGCGAG 3'
	ACSL3-1546-Top	5' GATCCTCCCATTAGTTTGCTGTGAAATCTGTGCTTGATTTCACAGCAAACTAATGGTTTTTGGAAA 3‘
	ACSL3-1546-Bottom	5’ AGCTTTTCCAAAAACCATTAGTTTGCTGTGAAATCAAGCACAGATTTCACAGCAAACTAATGGGAG 3’
ACSL4 (NM_053623)	ACSL4-645-Top	5' GATCCTCGAGTCTGAGGCTTCCTATCTTGTGCTTAGATAGGAAGCCTCAGACTCTTTTTGGAAA 3'

	ACSL4-645-bottom	5' AGCTTTTCCAAAAAGAGTCTGAGGCTTCCTATCTAAGCACAAGATAGGAAGCCTCAGACTCGAG 3'
	ACSL4-2201-Top	5' GATCCTCGGCAACTGTCTACTTCACATTGTGCTTATGTGAAGTAGACAGTTGCCTTTTTGGAAA 3'
	ACSL4-2201-bottom	5' AGCTTTTCCAAAAAGGCAACTGTCTACTTCACATAAGCACAATGTGAAGTAGACAGTTGCCGAG 3'
	ACSL4-3430-Top	5' GATCCTCGTGCAGTAACTTGGGAGTGTTGTGCTTACACTCCCAAGTTACTGCACTTTTTGGAAA 3'
	ACSL4-3430-bottom	5' AGCTTTTCCAAAAAGTGCAGTAACTTGGGAGTGTAAGCACAACACTCCCAAGTTACTGCACGAG 3'
ACSL5 (NM_053607)	ACSL5-392-Top	5' GATCCTCGACCTTGCTTGGGATACAGATGTGCTTTCTGTATCCCAAGCAAGGTCTTTTTGGAAA 3'
	ACSL5-392-bottom	5' AGCTTTTCCAAAAAGACCTTGCTTGGGATACAGAAAGCACATCTGTATCCCAAGCAAGGTCGAG 3'
	ACSL5-916-Top	5' GATCCTCGGTGACCCCAAAGGAGCTATTGTGCTTATAGCTCCTTTGGGGTCACCTTTTTGGAAA 3'
	ACSL5-916-bottom	5' AGCTTTTCCAAAAAGGTGACCCCAAAGGAGCTATAAGCACAATAGCTCCTTTGGGGTCACCGAG 3'
	ACSL5-1351-Top	5' GATCCTCGGGAAGGTTCGTCTCATGATTGTGCTTATCATGAGACGAACCTTCCCTTTTTGGAAA 3'
	ACSL5-1351-bottom	5' AGCTTTTCCAAAAAGGGAAGGTTCGTCTCATGATAAGCACAATCATGAGACGAACCTTCCCGAG 3'
ACSL6 (NM_130739.1)	ACSL6-436-Top	5' GATCCTCGCTTAGCATCTCAGGGAATGGTGTGCTTCCATTCCCTGAGATGCTAAGCTTTTTGGAAA 3'
	ACSL6-436-Bottom	5' AGCTTTTCCAAAAAGCTTAGCATCTCAGGGAATGGAAGCACACCATTCCCTGAGATGCTAAGCGAG 3'
	ACSL6-1243-Top	5' GATCCTCGCTGCTGAATCGGATGTATGATGTGCTTTCATACATCCGATTCAGCAGCTTTTTGGAAA 3'
	ACSL6-1243-Bottom	5' AGCTTTTCCAAAAAGCTGCTGAATCGGATGTATGAAAGCACATCATACATCCGATTCAGCAGCGAG 3'
	ACSL6-1848-Top	5' GATCCTCCCGAGAAGATTGAGAACATCTTGTGCTTAGATGTTCTCAATCTTCTCGGTTTTTGGAAA 3'
	ACSL6-1848-Bottom	5' AGCTTTTCCAAAAACCGAGAAGATTGAGAACATCTAAGCACAAGATGTTCTCAATCTTCTCGGGAG 3'

Supplemental Table 2. Nucleotide sequences of real time RT-PCR primers used in this study.

	Primer name	
Gene ID	**Human**	**Sequence**
NM_001995.2	ACSL1-For	5' AGCTGGTTGACTTCCGACAG 3'
	ACSL1-Rev	5' GTGAGTGCTGCAAAAGCTCC 3'
NM_004457.3	ACSL3-For	5' TGTTGATGGAAAGCCACCGAC 3'
	ACSL3-Rev	5' GTTTTCCATGCTGGCCTTGG 3'
NM_022977.2	ACSL4-For	5' AAGTAGACCAACGCCTTCAG 3'
	ACSL4-Rev	5' GTCCCAGTCCAGGTATTCTTTC 3'
NM_016234.3	ACSL5-For	5' CTGAAGCCACCCTGTCTCTG 3'
	ACSL5-Rev	5' TTCTTCCTGCCACACGAGTC 3'
NM_001205248.1	ACSL6-For	5' GAAGATGCAGACACAGGAGATC 3'
	ACSL6-Rev	5' TGAACCAGTAGGCAAGGATG 3'
NM_005271.3	Glut1-For	5' CAAATCCAACGCACCCAGAG 3'
	Glut1-Rev	5' CTGTCACTCCTCCAGCATTCAAG 3'
	Rat	
NM_012820	ACSL1-For	5' TCAGAGCAGTTCATCGGCATC 3'
	ACSL1-Rev	5' CGGTTCCAAGCGTGTCATAGAG 3'
NM_057107.1	ACSL3-For	5' TCTGCTTCTGTTGTCCCGTTG 3'
	ACSL3-Rev	5' AACTAATGGTGCTCCCACTCTGCC 3'
NM_053623	ACSL4-For	5' TGAATGTCTGCTTCTGCTGC 3'
	ACSL4-Rev	5' CCAACTCTTCCAGTAGTGTAGTCGG 3'
NM_053607	ACSL5-For	5' TGCCTCCTGACATTTGGAACG 3'
	ACSL5-Rev	5' CCCTCAATCCCTACAGACTGGTTG 3'
NM_130739.1	ACSL6-For	5' CATCATCAATACAGCGGACATCTG 3'
	ACSL6-Rev	5' CTCAGGGCATCGTCAAATGG 3'
NM_008133.4	Glut1-For	5' AACTACCACTTGCTCATGTCTG 3'
	Glut1-Rev	5' TTCTCAGATGCACCCGATATCC 3'