

Additional file 1

Table S1 Primers for human USP4 ORF and deletion mutants

Fragments	Primer Sequences (5'-3')
USP4-FL	1F(BamHI): ATGGGGATCCATGGCGGAAGGTGGAGGCTGC 963R(XhoI): CTAACCTCGAGGTTGGTGTCCATGCTGCAAG
USP4-M1(133-963)	133F(BamHI): ATGGGGATCCGTCGAGGTGTATTTGCTGGA 963R(XhoI): CTAACCTCGAGGTTGGTGTCCATGCTGCAAG
USP4-M2(228-963)	228F(BamHI): ATGGGGATCCACCTTGCAGTCAAAATCAAG 963R(XhoI): CTAACCTCGAGGTTGGTGTCCATGCTGCAAG
USP4-M3(296-963)	296F(BamHI): ATGGGGATCCCATATACAACCTGGGCTCTGT 963R(XhoI): CTAACCTCGAGGTTGGTGTCCATGCTGCAAG
USP4-M4(296-925)	296F(BamHI): ATGGGGATCCCATATACAACCTGGGCTCTGT 925R(XhoI): CTAACCTCGAGATCATCTCGACGTTGGTAAA
USP4-M5(296-776)	296F(BamHI): ATGGGGATCCCATATACAACCTGGGCTCTGT 776R(XhoI): CTAACCTCGAGCACTGTGGTCTTCTTCTTCT
USP4-M6(296-484+571-963)	296F(BamHI): ATGGGGATCCCATATACAACCTGGGCTCTGT 484R(XhoI): CTAACCTCGAGCTTCAAGGGCAGTGGCAGCGT 571F(XhoI): CTAACCTCGAGTCCGTGGATGGCTCGGAATGT 963R(BamHI): ATGGGGATCCGTTGGTGTCCATGCTGCAAG
USP4-M7(484-963)	484F(BamHI): ATGGGGATCCAAGAAAGATCGAGTTATGGA 963R(XhoI): CTAACCTCGAGGTTGGTGTCCATGCTGCAAG
USP4-M8(296-571)	296F(BamHI): ATGGGGATCCCATATACAACCTGGGCTCTGT 571R(XhoI): CTAACCTCGAGAGTGCTGCAGACCTCGTACAC
USP4-FL(MT)	F: GGGAAACACCGCCTTCATGAACTC R: AGGTTTCCAAGTCCACAG

Table S2 Primers for human PKM2 ORF and deletion mutants

Fragments	Primer Sequences (5'-3')
PKM2-FL	F(BamHI): ATGGGGATCCATGTCGAAGCCCCATAGTGA
	R(XhoI): CTA ACTCGAGTCACGGCACAGGAACAACAC
PKM2-▲N110	F(BamHI): ATGGGGATCCGCTCTAGACACTAAAGGACC
	R(XhoI): CTA ACTCGAGTCACGGCACAGGAACAACAC
PKM2-▲N165	F(BamHI): ATGGGGATCCAAGGTGGTGGAAAGTGGGCAG
	R(XhoI): CTA ACTCGAGTCACGGCACAGGAACAACAC
PKM2-▲C55	F(BamHI): ATGGGGATCCATGTCGAAGCCCCATAGTGA
	R(XhoI): CTA ACTCGAGGTCCTTGCACAGCACAGGGA
PKM2-▲C110	F(BamHI): ATGGGGATCCATGTCGAAGCCCCATAGTGA
	R(XhoI): CTA ACTCGAGATAAGAAGCCTCCACGCTGCC
PKM2-▲C165	F(BamHI): ATGGGGATCCATGTCGAAGCCCCATAGTGA
	R(XhoI): CTA ACTCGAGGGCTGTTTCTCCAGACAGCAT