

**Table S1.** Microbial taxa in ground squirrel cecal contents  
Asterisks indicate unclassified members of higher level taxa

Kingdom	Phylum	Class	Order	Family	Genus
Archaea	Euryarchaeota	Methanobacteria	Methanobacteriales	Methanobacteriaceae	<i>Methanosphaera</i>
Bacteria	Actinobacteria	Actinobacteria	Coriobacteriales	Coriobacteriaceae	*
		Actinobacteria	Coriobacteriales	Coriobacteriaceae	<i>Adlercreutzia</i>
	Bacteroidetes	Bacteroidia	Bacteroidales	*	
		Bacteroidia	Bacteroidales	Bacteroidaceae	<i>Bacteroides</i>
		Bacteroidia	Bacteroidales	Porphyromonadaceae	<i>Odoribacter</i>
		Bacteroidia	Bacteroidales	Porphyromonadaceae	<i>Parabacteroides</i>
		Bacteroidia	Bacteroidales	Prevotellaceae	*
		Bacteroidia	Bacteroidales	Prevotellaceae	<i>Prevotella</i>
		Bacteroidia	Bacteroidales	Rikenellaceae	*
		Bacteroidia	Bacteroidales	Rikenellaceae	<i>Alistipes</i>
	Cyanobacteria	4C0d-2	YS2	*	
		Chloroplast	Streptophyta	*	
	Elusimicrobia	Elusimicrobia	Elusimicrobiales	Elusimicrobiaceae	*
	Firmicutes	Bacilli	Bacillales	*	
		Bacilli	Lactobacillales	*	
		Bacilli	Lactobacillales	Lactobacillaceae	*
		Bacilli	Lactobacillales	Lactobacillaceae	<i>Lactobacillus</i>
		Bacilli	Lactobacillales	Streptococcaceae	<i>Streptococcus</i>
		Bacilli	Turicibacterales	Turicibacteraceae	*
		Clostridia	Clostridiales	*	
		Clostridia	Clostridiales	Catabacteriaceae	*
		Clostridia	Clostridiales	FamilyXIII	<i>Eubacterium</i>
		Clostridia	Clostridiales	Dehalobacteriaceae	<i>Dehalobacterium</i>
		Clostridia	Clostridiales	Lachnospiraceae	*
		Clostridia	Clostridiales	Lachnospiraceae	<i>Blautia</i>
		Clostridia	Clostridiales	Lachnospiraceae	<i>Clostridium</i>
		Clostridia	Clostridiales	Lachnospiraceae	<i>Coprococcus</i>
		Clostridia	Clostridiales	Lachnospiraceae	<i>Roseburia</i>
		Clostridia	Clostridiales	Lachnospiraceae	<i>Ruminococcus</i>
		Clostridia	Clostridiales	Peptococcaceae	*
		Clostridia	Clostridiales	Ruminococcaceae	*
		Clostridia	Clostridiales	Ruminococcaceae	<i>Bacteroides</i>
		Clostridia	Clostridiales	Ruminococcaceae	<i>Clostridium</i>
		Clostridia	Clostridiales	Ruminococcaceae	<i>Eubacterium</i>
		Clostridia	Clostridiales	Ruminococcaceae	<i>Faecalibacterium</i>
		Clostridia	Clostridiales	Ruminococcaceae	<i>Oscillospira</i>
		Clostridia	Clostridiales	Ruminococcaceae	<i>Ruminococcus</i>
		Clostridia	Clostridiales	Veillonellaceae	*
		Erysipelotrichi	Erysipelotrichales	Erysipelotrichaceae	*
		Erysipelotrichi	Erysipelotrichales	Erysipelotrichaceae	<i>Clostridium</i>
		Erysipelotrichi	Erysipelotrichales	Erysipelotrichaceae	<i>Coprobacillus</i>
		Erysipelotrichi	Erysipelotrichales	Erysipelotrichaceae	<i>Holdemania</i>
	Proteobacteria	Alphaproteobacteria	*		
		Alphaproteobacteria	Caulobacterales	Caulobacteraceae	<i>Brevundimonas</i>
		Alphaproteobacteria	Rhizobiales	Bradyrhizobiaceae	<i>Afipia</i>
		Alphaproteobacteria	Rickettsiales	*	
		Alphaproteobacteria	Sphingomonadales	Sphingomonadaceae	<i>Sphingomonas</i>
		Betaproteobacteria	Burkholderiales	*	
		Betaproteobacteria	Burkholderiales	Comamonadaceae	*
		Betaproteobacteria	Burkholderiales	Comamonadaceae	<i>Limnohabitans</i>
		Betaproteobacteria	Burkholderiales	Oxalobacteraceae	*
		Deltaproteobacteria	Desulfovibrionales	*	

	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	*
	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	<i>Bilophila</i>
	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	<i>Desulfovibrio</i>
	Deltaproteobacteria	Desulfovibrionales	Desulfovibrionaceae	<i>LE30</i>
	Epsilonproteobacteria	Campylobacterales	Campylobacteraceae	<i>Campylobacter</i>
	Gammaproteobacteria	Aeromonadales	Aeromonadaceae	<i>Aeromonas</i>
	Gammaproteobacteria	Pseudomonadales	Moraxellaceae	<i>Acinetobacter</i>
Tenericutes	Mollicutes	*		
	Mollicutes	Anaeroplasmatales	Anaeroplasmataceae	<i>Anaeroplasma</i>
	Mollicutes	Mycoplasmatales	Mycoplasmataceae	*
	Mollicutes	Mycoplasmatales	Mycoplasmataceae	<i>Mycoplasma</i>
	Mollicutes	RF39	*	
Verrucomicrobia	Verrucomicrobiae	Verrucomicrobiales	Verrucomicrobiaceae	<i>Akkermansia</i>