

TABLE S2: Natural *E. coli* isolates used in this study (compiled from (19, 65))

Strain	Origin	Host ^a	Common name	Group
Ec.001	Antarctic	<i>Aptenodytes forsteri</i>	Emperor penguin	B1
Ec.002	Antarctic	<i>Aptenodytes forsteri</i>	Emperor penguin	A
Ec.003	Antarctic	<i>Aptenodytes forsteri</i>	Emperor penguin	B2
Ec.004	Antarctic	<i>Aptenodytes forsteri</i>	Emperor penguin	B2
Ec.005	Gabon	<i>Loxodonta africana</i>	Elephant	B2
Ec.006	Gabon	<i>Syncerus caffer nanus</i>	African buffalo	B2
Ec.007	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	D
Ec.008	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	D
Ec.009	Gabon	<i>Gorilla gorilla</i>	Gorilla	B2
Ec.010	Gabon	<i>Gorilla gorilla</i>	Gorilla	D
Ec.011	Gabon	<i>Aepyceros melampus</i>	Impala	A
Ec.012	Gabon	<i>Taurotragus oryx</i>	Eland	A
Ec.013	Gabon	<i>Gorilla gorilla</i>	Gorilla	B2
Ec.014	Gabon	<i>Gorilla gorilla</i>	Gorilla	D
Ec.015	Gabon	<i>Gorilla gorilla</i>	Gorilla	D
Ec.016	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	B2
Ec.017	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	D
Ec.018	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	B2
Ec.019	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	A
Ec.020	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	D
Ec.021	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	B2
Ec.022	Gabon	<i>Cephalophus sylvicultor</i>	Yellow-backed duiker	B2
Ec.023	Gabon	<i>Syncerus caffer nanus</i>	African buffalo	B2
Ec.024	Gabon	<i>Loxodonta africana</i>	Elephant	D
Ec.025	Gabon	<i>Loxodonta africana</i>	Elephant	D
Ec.026	Gabon	<i>Loxodonta africana</i>	Elephant	B2
Ec.027	Gabon	<i>Aepyceros melampus</i>	Impala	B2
Ec.028	Gabon	<i>Aepyceros melampus</i>	Impala	A
Ec.029	Gabon	<i>Aepyceros melampus</i>	Impala	D
Ec.030	Gabon	<i>Aepyceros melampus</i>	Impala	B2
Ec.031	Gabon	<i>Aepyceros melampus</i>	Impala	A
Ec.032	Gabon	<i>Taurotragus oryx</i>	Eland	D
Ec.033	Gabon	<i>Antidorcas marsupialis</i>	Springbok	D
Ec.034	Gabon	<i>Antidorcas marsupialis</i>	Springbok	A
Ec.035	Gabon	<i>Antidorcas marsupialis</i>	Springbok	A
Ec.036	Gabon	<i>Oryx gazella</i>	Gemsbok	A
Ec.037	Gabon	<i>Oryx gazella</i>	Gemsbok	D
Ec.038	Gabon	<i>Antidorcas marsupialis</i>	Springbok	B1
Ec.039	Gabon	<i>Antidorcas marsupialis</i>	Springbok	B1
Ec.040	Pyrenees mountain	<i>Vulpes vulpes</i>	Fox	D
Ec.041	Pyrenees mountain	<i>Vulpes vulpes</i>	Fox	D
Ec.042	Pyrenees mountain	<i>Martes foina</i>	Beech marten	B2
Ec.043	Pyrenees mountain	<i>Martes martes</i>	Pine marten	D
Ec.044	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	B2
Ec.045	Pyrenees mountain	<i>Martes martes</i>	Pine marten	D

Ec.046	Pyrenees mountain	<i>Martes martes</i>	Pine marten	D
Ec.047	Pyrenees mountain	<i>Martes martes</i>	Pine marten	B1
Ec.048	Pyrenees mountain	<i>Martes martes</i>	Pine marten	B1
Ec.049	Pyrenees mountain	<i>Martes martes</i>	Pine marten	D
Ec.050	Pyrenees mountain	<i>Martes martes</i>	Pine marten	D
Ec.051	Pyrenees mountain	<i>Ovis ammon</i>	European mouflon sheep	B1
Ec.052	Pyrenees mountain	<i>Ovis ammon</i>	European mouflon sheep	B1
Ec.053	Pyrenees mountain	<i>Ovis ammon</i>	European mouflon sheep	B1
Ec.054	Pyrenees mountain	<i>Vulpes vulpes</i>	Fox	B1
Ec.055	Pyrenees mountain	<i>Vulpes vulpes</i>	Fox	B1
Ec.056	Pyrenees mountain	<i>Cervus elaphus</i>	Common deer	D
Ec.057	Pyrenees mountain	<i>Rupicapra pyrenaica</i>	Pyrenean isard	B1
Ec.058	Pyrenees mountain	<i>Vulpes vulpes</i>	Fox	B2
Ec.059	Pyrenees mountain	<i>Ovis ammon</i>	European mouflon sheep	B2
Ec.060	Pyrenees mountain	<i>Lepus capensi</i>	Domestic rabbit	B2
Ec.061	Pyrenees mountain	<i>Lepus capensi</i>	Domestic rabbit	B2
Ec.062	Pyrenees mountain	<i>Capreolus capreolus</i>	Roe deer	B2
Ec.063	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	D
Ec.064	Pyrenees mountain	<i>Microtus arvalis</i>	Common voles	B1
Ec.065	Pyrenees mountain	<i>Lepus capensi</i>	Domestic rabbit	B1
Ec.066	Pyrenees mountain	<i>Lepus capensi</i>	Domestic rabbit	B1
Ec.067	Pyrenees mountain	<i>Martes martes</i>	Pine marten	B2
Ec.068	Pyrenees mountain	<i>Microchiropteres sp.</i>	Bat	B1
Ec.069	Pyrenees mountain	<i>Sciurus vulgaris</i>	Red squirrel	D
Ec.070	Pyrenees mountain	<i>Sciurus vulgaris</i>	Red squirrel	B1
Ec.071	Pyrenees mountain	<i>Capreolus capreolus</i>	Roe deer	B1
Ec.072	Pyrenees mountain	<i>Rupicapra pyrenaica</i>	Pyrenean isard	B1
Ec.073	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	D
Ec.074	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	B2
Ec.075	Pyrenees mountain	<i>Cervus elaphus</i>	Common deer	B2
Ec.076	Pyrenees mountain	<i>Martes martes</i>	Pine marten	B2
Ec.077	Pyrenees mountain	<i>Martes martes</i>	Pine marten	B2
Ec.078	Pyrenees mountain	<i>Capreolus capreolus</i>	Roe-deer	B2
Ec.079	Pyrenees mountain	<i>Myocastor coypus</i>	Nutria	B2
Ec.080	Pyrenees mountain	<i>Capreolus capreolus</i>	Roe-deer	B1
Ec.081	Pyrenees mountain	<i>Rupicapra pyrenaica</i>	Pyrenean isard	B1
Ec.082	Pyrenees mountain	<i>Cervus elaphus</i>	Common deer	B1
Ec.083	Pyrenees mountain	<i>Ursus arctos</i>	Brown bear	A1
Ec.084	Pyrenees mountain	<i>Marmota marmota</i>	Marmot	B1
Ec.085	Pyrenees mountain	<i>Marmota marmota</i>	Marmot	B2
Ec.086	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	B1
Ec.087	Pyrenees mountain	<i>Turdus merula</i>	Blackbird	D
Ec.088	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	D
Ec.089	Pyrenees mountain	<i>Sus scrofa</i>	Wild boar	B2
Ec.090	Pyrenees mountain	<i>Cervus elaphus</i>	Common deer	B1
Ec.091	Pyrenees mountain	<i>Oryctolagus cuniculus</i>	Rabbit	D
Ec.092	Pyrenees mountain	<i>Marmota marmota</i>	Marmot	B2
Ec.093	Pyrenees mountain	<i>Ovis ammon</i>	European mouflon sheep	D

Ec.094	Pyrenees mountain	Capreolus capreolus	Roe-deer	D
Ec.095	Pyrenees mountain	Capreolus capreolus	Roe-deer	B1
Ec.096	Pyrenees mountain	<i>Cervus elaphus</i>	Common deer	B1