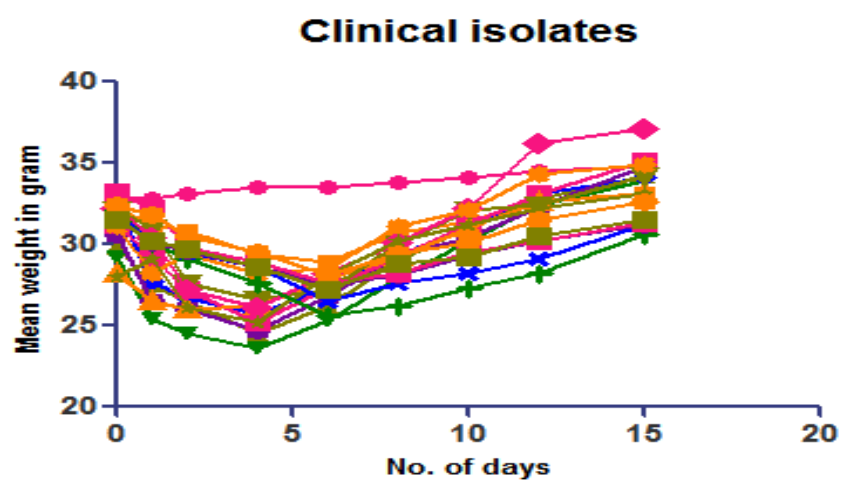
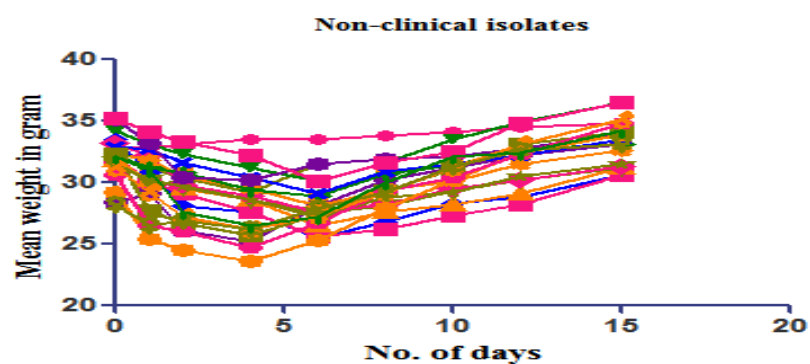


Supplementary Data:

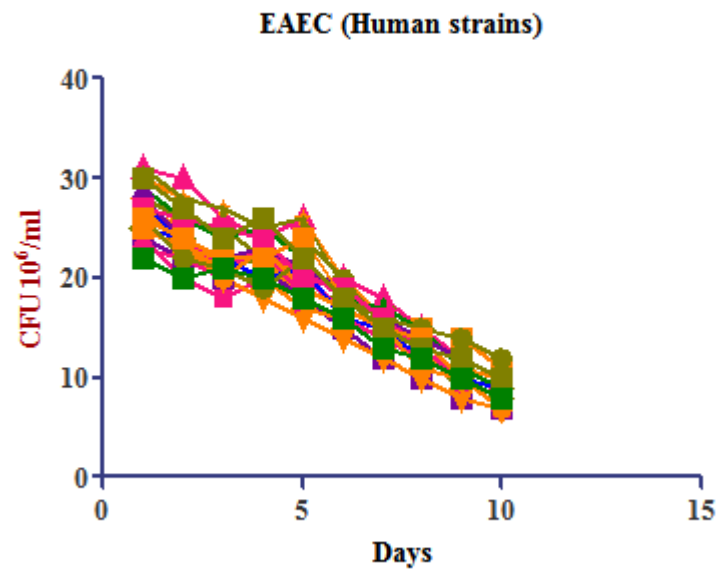


**Figure S1.** Mean weight change (gram) in Balb/C mice challenged with EAEC isolates from the human.

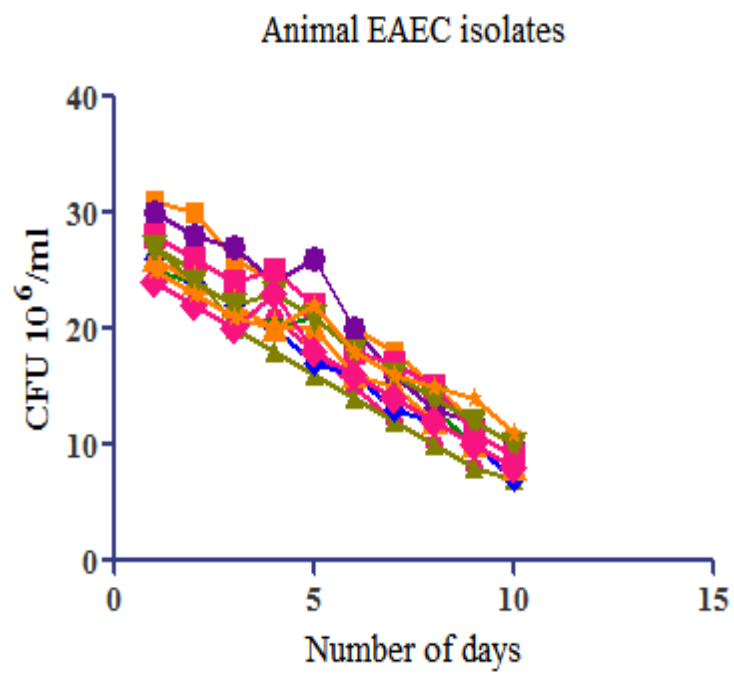


**FigureS2.** Mean weight change (gram) in Balb/C mice challenged with EAEC isolates from non-clinical (animal and environment) sources.

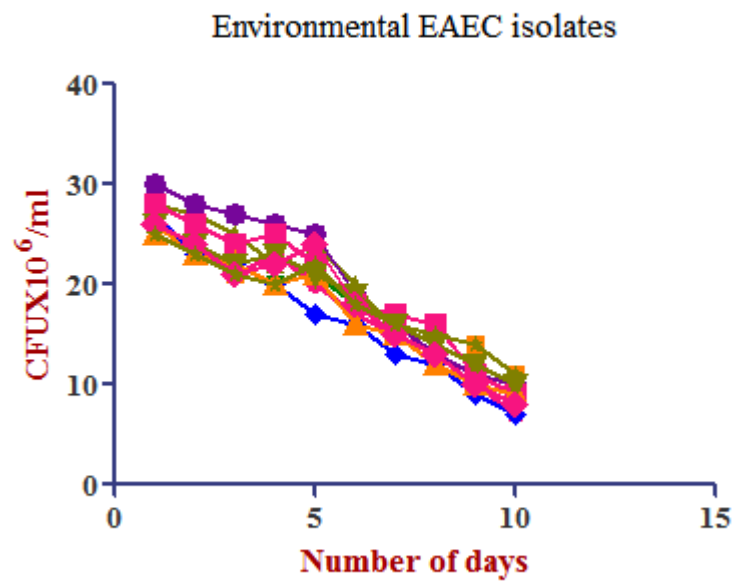
A



B

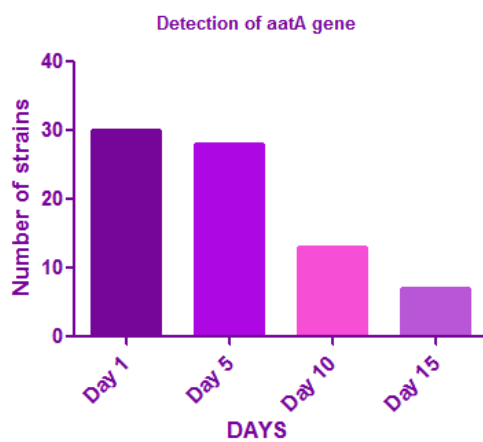


C

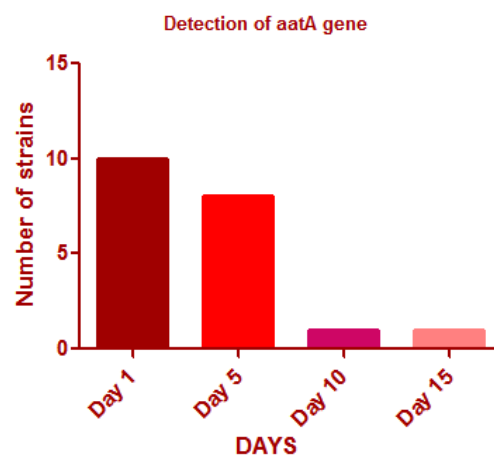


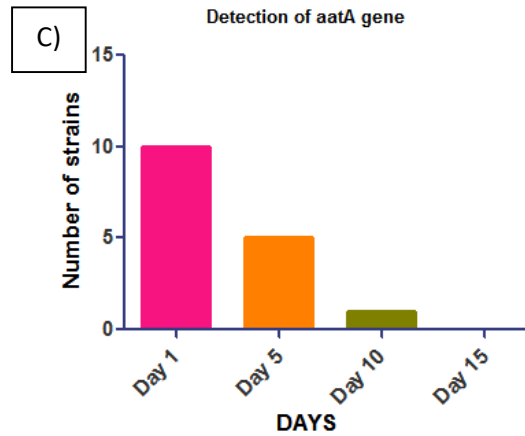
**FigureS3.** Stool shedding of EAEC in treated Balb/C mice infected with EAEC isolates of A) human, B) animal and C) environmental origin.

A)



B)





**Figure S4.** Colonization and persistence of EAEC (detected by *attA* gene of EAEC) isolate in Balb/C mice from A) human origin, B) animal origin and C) environmental origin.

**Table S1.** Primers with description of the target gene, product size in base pairs, and annealing temperature, used for the 4 multiplex polymerase chain reactions (M-PCRs) and 3 monoplex PCRs.

Target gene and description	Type of PCR	Primer Sequence (5'-3')	PCR Product, Size (bp)	GenBank Accession No.	Annealing Temperature (°C)	References
<i>astA</i> - EAST-1 heat-stable toxin	M-PCR 1	ATGCCATCAACA CAGTAT GCGAGTGACGGC TTTGTAGT	110	L11241	58	33
<i>Pet</i> - Plasmid-encoded toxin		GGCACAGAATAA AGGGGTGTTT CCTCTTGTTTCCA CGACATAC	302	AF05658 1	58	34
<i>sigA</i> - IgA protease-like homolog		CCGACTTCTCACT TTCTCCCG CCATCCAGCTGC ATAGTGTTTG	430	NC_0043 37	58	35
<i>pic</i> - Serine protease precursor		ACTGGATCTTAA GGCTCAGGAT GACTTAATGTCA CTGTTTCAGCG	572	AF09764 4	58	34

<i>sepA</i> - Shigella extracellular protease		GCAGTGGAAATA TGATGCGGC TTGTTTCAGATCGG AGAAGAACG	794	Z48219	58	34
<i>sat</i> - Secreted autotransporter toxin		TCAGAAGCTCAG CGAATCATTG CCATTATCACCA GTAAAACGCACC	932	AE01407 5	58	35
ORF3-Cryptic protein	M-PCR 2	CAGCAACCATCG CATTCTA CGCATCTTTCAAT ACCTCCA	121	<u>AB26101</u> <u>6.2</u>	57	35
<i>aap</i> -Dispersin, antiaggregation protein		GGACCCGTCCCA ATGTATAA CCATTTCGGTTAG AGCACGAT	250	Z32523	57	35
<i>aaiC</i> - AaiC, secreted protein		TGGTGACTACTTT GATGGACATTGT GACACTCTCTTCT GGGGTAAACGA	313	<u>AB25543</u> <u>5.1</u>	57	35
<i>aggR</i> -Transcriptional activator		GCAATCAGATTA ARCAGCGATACA CATTCTTGATTGC ATAAGGATCTGG	426	Z18751	57	35
<i>agg4A</i> - AAF/IV fimbrial subunit		TGAGTTGTGGGG CTAYCTGGA CACCATAAGCCG CCAAATAAGC	169	EU63702 3	57	35
<i>aggA</i> - AAF/I fimbrial subunit	M-PCR 3	TCTATCTRGGGG GGCTAACGCT ACCTGTTCCCCAT AACCAGACC	220	Y18149	57	35
<i>aafA</i> - AAF/II fimbrial subunit		CTACTTTATTATC AAGTGGAGCCGC TA GGAGAGGCCAGA GTGAATCCTG	289	AY3445 86	57	35
<i>agg3A</i> - AAF/III fimbrial subunit		CCAGTTATTACA GGGTAACAAGGG AA TTGGTCTGGAAT AACAACCTGAAC G	370	AF41106 7	57	35

<i>aafC</i> -Usher, AAF/II assembly unit		ACAGCCTGCGGT CAAAAGC GCTTACGGGTAC GAGTTTTACGG	491	AF11482 8	57	35
ORF61- Plasmid- encoded hemolysin	M-PCR 4	AGCTCTGGAAC TGGCCTCT AACCGTCCTGATT TCTGCTT	108	<u>J02459.1</u>	57	35
<i>eilA</i> - Salmonella HilA homolog		AGGTCTGGAGCG CGAGTGTT GTAAAACGGTAT CCACGACC	248	<u>CP00968</u> <u>5.1</u>	57	35
<i>capU</i> - Hexosyltransferase homolog		CAGGCTGTTGCTC AAATGAA GTTCGACATCCTT CCTGCTC	395	AF13440 3	57	35
<i>air</i> - Enteroaggregative immunoglobulin repeat protein		TTATCCTGGTCTG TCTCAAT GGTTAAATCGCTGC TTCTT	600	<u>CP00968</u> <u>5.1</u>	57	35
<i>espY2</i> - Non-LEE- encoded type III secreted effector	Singlepl ex PCR	CGCAAAAGATCC GGAAAATA TCAGCATTGCTCA GGTCAAC	216	ECSP_00 73	57	35
<i>rmoA</i> - Putative hemolysin expression- modulating protein	Singlepl ex PCR	TTACCTTACATAT TTCCATATC CGAAAACAAAAC AGGAATGG	210	ECUMN_ 0072	59	35
<i>shiA</i> - shiA-like inflammation suppressor	Singlepl ex PCR	CAGAATGCCCCG CGTAAGGC CACTGAAGGCTCG CTCATGATCGCCG	292	ECB_035 17	57	36

**Table S2: Primers used for the triplex polymerase chain reactions target gene description, base-pair size, annealing temperature, and primers concentration.**

Gene/ Target	Primer Sequence (5'- 3')	PCR Produ ct, bp	Annealing Temperature Primer Concentration (_C), pmol/μl	References
ChuA	GACGAACCAACGGTCAGGT TGCCGCCAGTACCAAAGAA	279	55/25	39
YjaA	TGAAGTGTCAGGAGACGCTG		55/25	39

	GAGTAATGTCGGGGGCATTCA	211		
TspE4C 2	GAGTAATGTCGGGGGCATTCA CGCGCCAACAAAGTATTACG	152	52/25	39

**Table S3: Shows the group of mice to be tested.**

			<b>Group 1</b>	<b>Group 2</b>	<b>Group 3</b>	<b>Group 4</b>	<b>Group 5</b>	<b>Total</b>
<b>Animal</b>	<b>Route</b>	<b>Years wise break- up</b>	<b>Control (PBS)</b>	<b>Control strain EAEC 042</b>	<b>EAEC strains from human source (n=30) {Acute diarrheal (n=13), healthy (n=7), immunocompromised patients (n=7), malnourished children (n=3), chronic diarrhea (n=3)}</b>	<b>EAEC strains from animal source (10 strains)</b>	<b>EAEC strains from environmental source (10 strains)</b>	
Six week old male BALB/c	Intragastrically	1 <sup>st</sup> year	6 mice	6 mice	6x30=180 mice	6x10=60 mice	6x10=60 mice	312 mice