

Prevalence and characterization of *Clostridium perfringens* toxinotypes among patients with antibiotic-associated diarrhea in Iran

Masoumeh Azimirad, Fatemeh Gholami, Abbas Yadegar, Daniel R. Knight, Sharareh Shamloei, Hamid Asadzadeh Aghdaei & Mohammad Reza Zali

Supplementary information

Supplementary Figure 1:

| | Amphipathic region | AIP | Charged region | |
|------------------------|--|--------|----------------------------|---------|
| CP013101 [CP FORC_025] | MKKLNK N LLT L FAALT T VVATT V ATSAC | CLWFT | HQPEE E PKSLRDE | |
| MH377337 [Cp RIGLD-1] | | | | Non-AAD |
| MH377338 [Cp RIGLD-2] | | | | AAD |
| MH377339 [Cp RIGLD-4] | | | | Non-AAD |
| MH377340 [Cp RIGLD-5] | | | | AAD |
| MH377341 [Cp RIGLD-6] | | I..... | | AAD |
| MH377342 [Cp RIGLD-9] | | | | AAD |
| MH377343 [Cp RIGLD-10] | | I..... | | Non-AAD |
| MH377344 [Cp RIGLD-11] | | | | AAD |
| MH377345 [Cp RIGLD-15] | | | | AAD |
| MH377346 [Cp RIGLD-24] | | | | AAD |
| MH377347 [Cp RIGLD-25] | | | | AAD |
| MH377348 [Cp RIGLD-26] | | | | Non-AAD |
| MH377349 [Cp RIGLD-27] | | | | AAD |
| MH377350 [Cp RIGLD-29] | | | | AAD |
| MH377351 [Cp RIGLD-32] | | | | AAD |
| MH377352 [Cp RIGLD-34] | | | | AAD |
| MH377353 [Cp RIGLD-35] | | | | AAD |
| MH377354 [Cp RIGLD-36] | | | | Non-AAD |
| MH377355 [Cp RIGLD-37] | | | | Non-AAD |
| MH377356 [Cp RIGLD-41] | | | | AAD |
| MH377357 [Cp RIGLD-42] | | | | AAD |
| MH377358 [Cp RIGLD-43] | | | | AAD |
| MH377359 [Cp RIGLD-44] | | | | AAD |
| MH377360 [Cp RIGLD-45] | | | | AAD |
| MH377361 [Cp RIGLD-46] | | | | Non-AAD |
| MH377362 [Cp RIGLD-47] | | | | AAD |
| MH377363 [Cp RIGLD-49] | | | | AAD |
| MH377364 [Cp RIGLD-50] | | | | AAD |
| MH377365 [Cp RIGLD-51] | | | | AAD |
| MH377366 [Cp RIGLD-53] | | | | AAD |
| MH377367 [Cp RIGLD-54] | | | | AAD |
| MH377368 [Cp RIGLD-55] | | | | AAD |
| MH377369 [Cp RIGLD-56] | | | | AAD |
| MH377370 [Cp RIGLD-58] | | I..... | | AAD |
| MH377371 [Cp RIGLD-59] | | | | AAD |
| MH377372 [Cp RIGLD-60] | | | | Non-AAD |
| MH377373 [Cp RIGLD-61] | | | | AAD |
| MH377374 [Cp RIGLD-62] | | | | AAD |
| MH377375 [Cp RIGLD-63] | | | | AAD |
| MH377376 [Cp RIGLD-64] | | | | AAD |
| MH377377 [Cp RIGLD-65] | | | | AAD |
| MH377378 [Cp RIGLD-66] | | | | AAD |
| MH377379 [Cp RIGLD-67] | | | | Non-AAD |
| MH377380 [Cp RIGLD-68] | | I..... | | AAD |
| MH377381 [Cp RIGLD-69] | | | | Non-AAD |
| MH377382 [Cp RIGLD-70] | | | | AAD |
| MH377383 [Cp RIGLD-71] | | | | AAD |
| MH377384 [Cp RIGLD-72] | | | | AAD |
| MH377385 [Cp RIGLD-73] | | | | Non-AAD |
| MH377386 [Cp RIGLD-74] | | | | AAD |
| MH377387 [Cp RIGLD-75] | | | | AAD |
| MH377388 [Cp RIGLD-79] | | | | AAD |
| MH377389 [Cp RIGLD-80] | | | | Non-AAD |
| MH377390 [Cp RIGLD-81] | | | | AAD |
| MH377391 [Cp RIGLD-82] | | | | AAD |
| MH377392 [Cp RIGLD-83] | | | | AAD |
| MH377393 [Cp RIGLD-85] | | | | AAD |
| MH377394 [Cp RIGLD-88] | | | | AAD |
| MH377395 [Cp RIGLD-89] | | V..... | | AAD |
| MH377396 [Cp RIGLD-90] | | | | AAD |
| MH377397 [Cp RIGLD-91] | | | | Non-AAD |
| MH377398 [Cp RIGLD-93] | | | | AAD |
| MH377399 [Cp RIGLD-94] | | | | AAD |
| MH377400 [Cp RIGLD-95] | | | | AAD |

Supplementary Figure 1. Complete amino acid sequence alignment of AgrD from 64 *C. perfringens* isolates from patients in antibiotic-associated diarrhea (AAD) group and non-AAD group. The AgrD amino acid sequence of *C. perfringens* strain FORC_025 (CP013101.1) as the reference strain is shown on the top line. The peptides are split into three regions representing the N-terminal amphipathic region, the autoinducing peptide (AIP) encoding region and the C-terminal charged region. The putative amino acid motif to form the thiolactone/lactone ring structure of the mature AIP and a highly conserved proline residue found in all AgrD peptides are surrounded in boxes.