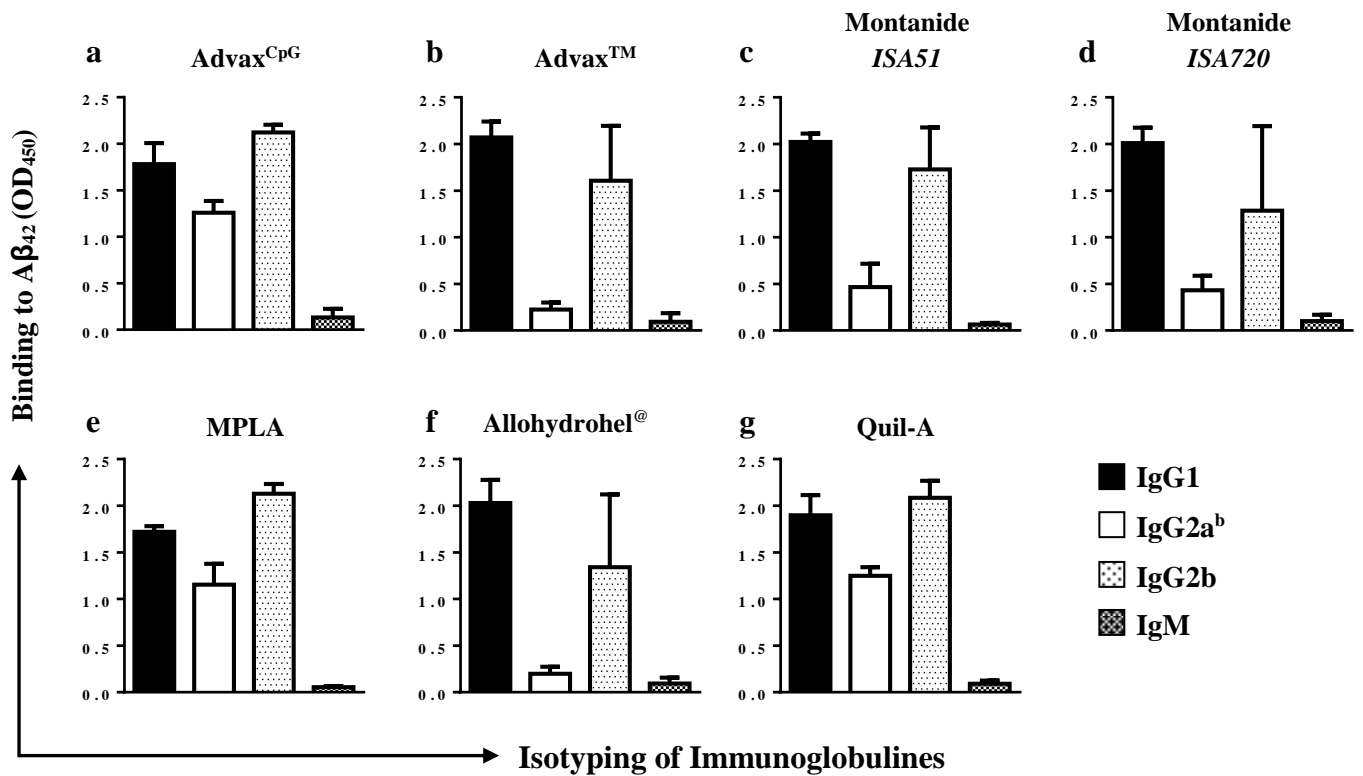


Supplementary Information

Alzheimer's disease Advax^{CpG}- adjuvanted MultiTEP-based dual and single vaccines induce high-titer antibodies against tau and A β

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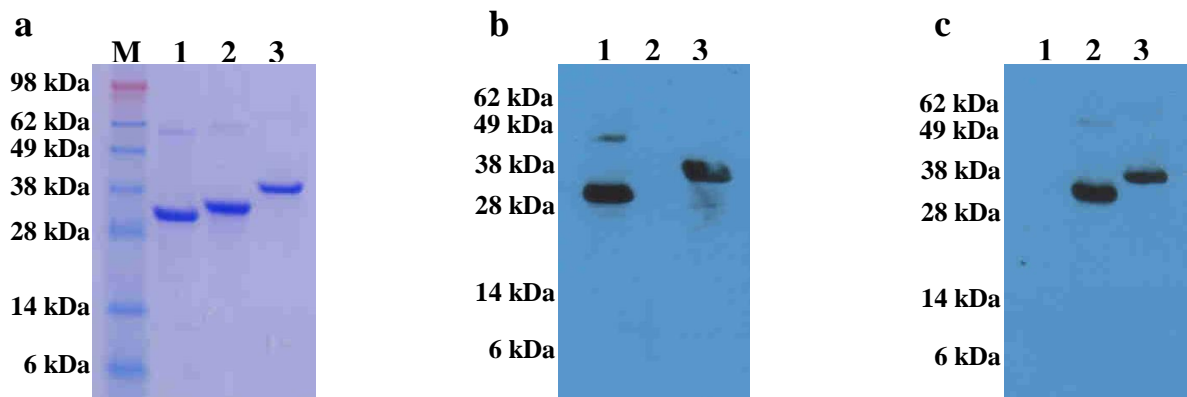
Figure S1



Anti-A β IgG1, IgG2a^b, IgG2b and IgM antibody responses in mice immunized with AV-1959R formulated with different adjuvants. To normalize ELISA protocol sera from mice were used at different dilutions in each group.

(a) AV-1959R+Advax^{CpG} (dilution 1:1000); (b) AV-1959R+AdvaxTM (dilution 1:200); (c) AV-1959R+Montanide-ISA51 (dilution 1:500); (d) AV-1959R+Montanide-ISA720 (dilution 1:200); (e) AV-1959R+MPLA (dilution 1:500); (f) AV-1959R+Allohydrohel[®] (dilution 1:50); and (g) AV-1959R+Quil-A (dilution 1:500). Bars represent average \pm SD (n=5 per group).

Figure S2



Generation and characterization of recombinant proteins: AV-1959R, AV-1980R and AV-1953R. (a) The purity and integrity of all three proteins isolated from *E.coli* was analyzed in a 10% Bis-Tris polyacrylamide gel in MES buffer after visualization by Coomassie dye. The molecular weights of protein bands are corresponded to the theoretically calculated molecular weights (M-Molecular weight marker; Lane 1 - AV-1959R [32.3 kDa], Lane 2 – AV-1980R [33.8 kDa], Lane 3 – AV-1953R [38.0 kDa]). As expected dual vaccine AV-1953R containing both A β and tau B cell epitopes is heavier than each single vaccine (AV-1959R and AV-1980R), containing either A β or tau B cell epitope. In all vaccines B cell epitopes are attached to the same MultiTEP platform. (b, c) The specificity of the bands was confirmed by WB using 6E10 (anti-A β ; b) and 1C9 (anti-Tau; c) monoclonal antibodies followed by HRP conjugated anti-mouse IgG (Lane 1 - AV-1959R, Lane 2 – AV-1980R, Lane 3 – AV-1953R).

Table S1. Templates used for AV-1959R

| PDB ID | Reference |
|--------|-----------|
| 2NYYA | 3 |
| 3J2VC | 4 |
| 1QGTA | 5 |
| 1F31A | 6 |
| 2G33C | 8 |
| 3RSJA | 7 |
| 3KXSF | 11 |

Table S2. Templates used for AV-1980R

| PDB ID | Reference |
|--------|-----------|
| 1G55A | 1 |
| 2VU9A | 2 |
| 2NYYA | 3 |
| 3J2VC | 4 |
| 1F31A | 6 |
| 1QGTA | 5 |
| 3RSJA | 7 |
| 3KXSF | 11 |

Table S3. Templates used for AV-1953R

| PDB ID | Reference |
|--------|-----------|
| 2NYYA | 3 |
| 3J2VC | 4 |
| 1QGTA | 5 |
| 3RSJA | 7 |
| 2G33C | 8 |
| 1UTEA | 9 |
| 3FFZA | 10 |
| 1K6WA | 12 |
| 3V6ZE | 13 |

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