

**Table S1: Epitope set from IEDB used for validation.**

To generate a set of experimentally determined epitopes for comparison, we first downloaded complete IEDB records of all influenza A epitopes listed under “T-cell response”. A subset was made which comprised records which had identified HLA (human or mice transgenic for HLAs) and limited to those comprising influenza isolates of hemagglutinin serotypes HA1, HA3 or HA5. Records were eliminated if the virus name was incomplete, unless the HA serotype was identified. We opted to restrict the list to publications or submissions dated 2000 or later. This was to provide a manageable number and to reduce nomenclature confusion.

These steps provided a list of 1228 records described in 35 publications and 5 groups of direct submissions. The list included many duplicate reports of the same epitope. Epitopes associated with seven publications were eliminated because the papers were designed to develop a new assay using control epitopes described by others, or where previously described epitopes were used in some secondary manner, for example to examine cross reactivity with non influenza epitopes.

As the designation of “positive” or “negative” made by IEDB denotes the response to a specific assay, we then manually curated the list by reference to the source publications. Some records listed as “positive” were removed because they identified a peptide status as an immunogen but not as an influenza epitope. Weak positives, some of which appeared in both negative and positive IEDB curations, were removed. Some negatives were removed as review of the experimental design showed negative did not equate to “non epitope” but was a function of experimental design (e.g. use as control in an adverse combination). Four additional positive records and seven additional negative records were identified from the publications. Assays used included Cr release, EPISPOT and tetramers.

The resultant list, shown below, comprised 457 positives and 171 negatives from 21 publications (PMIDs shown in table) and 3 groups of direct submissions to IEDB. The list contains duplicate entries for some epitopes, mostly positives, as IEDB records an entry for each experimental procedure. Comparative analysis was conducted twice, first using all records (including duplicates), and more conservatively, using only the unique epitope sequences. The unique sequences comprised 296 positives and 164 negatives. The outcome of the analysis based on the unique epitopes is shown in Figure S1.

| IEDB Ref ID | PubMed ID | Curation | HLA   | Epitope Linear Sequence | Method/Technique    | MHC Allele | Name | Protein  | Virus_ID |
|-------------|-----------|----------|-------|-------------------------|---------------------|------------|------|--|----------|
| 931         | 10773346  | pos      | MHC I | FMYSDFHFI               | 51 chromium release | HLA-A*0201 | PA   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | FMYSDFHFI               | 51 chromium release | HLA-A*0201 | PA   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | FMYSDFHFI               | 51 chromium release | HLA-A*0201 | PA   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | GILGFVFTL               | 51 chromium release | HLA-A*0201 | M1   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | GILGFVFTL               | 51 chromium release | HLA-A*0201 | M1   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | GILGFVFTL               | 51 chromium release | HLA-A*0201 | M1   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | GLISLILQI               | 51 chromium release | HLA-A*0201 | NA   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |
| 931         | 10773346  | pos      | MHC I | ILGFVFTLTV              | 51 chromium release | HLA-A*0201 | M1   | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |          |

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|        |          |     |       |             |                                       |            |     |  |
|--------|----------|-----|-------|-------------|---------------------------------------|------------|-----|--|
| 931    | 10773346 | pos | MHC I | ILGFVFTLV   | 51 chromium release                   | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | ILGFVFTLV   | 51 chromium release                   | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | NMLSTVLGV   | 51 chromium release                   | HLA-A*0201 | PB1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | NMLSTVLGV   | 51 chromium release                   | HLA-A*0201 | PB1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SLCPIRGWAI  | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SLCPIRGWAI  | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SLENFRAYV   | 51 chromium release                   | HLA-A*0201 | PA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SLENFRAYV   | 51 chromium release                   | HLA-A*0201 | PA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | GIAPLQLGK   | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | KSMREEYRK   | 51 chromium release                   | HLA-A11    | M2  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | KSMREEYRK   | 51 chromium release                   | HLA-A11    | M2  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RMVLASTTAK  | 51 chromium release                   | HLA-A11    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RMVLASTTAK  | 51 chromium release                   | HLA-A11    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RTLDFHDSNVK | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RTLDFHDSNVK | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RTLDFHDSNVK | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RVLSFIKGTK  | 51 chromium release                   | HLA-A11    | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RVLSFIKGTK  | 51 chromium release                   | HLA-A11    | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | RVLSFIKGTK  | 51 chromium release                   | HLA-A11    | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SIIPSGPLK   | 51 chromium release                   | HLA-A11    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | SIIPSGPLK   | 51 chromium release                   | HLA-A11    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | TMVMELVRMIK | 51 chromium release                   | HLA-A11    | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | VTAACSHAGK  | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 931    | 10773346 | pos | MHC I | VTAACSHAGK  | 51 chromium release                   | HLA-A11    | HA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 893    | 10888619 | pos | MHC I | SRYWAIRTR   | 51 chromium release                   | HLA-B27    | NP  | Influenza A virus H3N2                         |
| 893    | 10888619 | pos | MHC I | SRYWAIRTR   | 51 chromium release                   | HLA-B27    | NP  | Influenza A virus H3N2                         |
| 893    | 10888619 | pos | MHC I | SRYWAIRTR   | 51 chromium release                   | HLA-B27    | NP  | Influenza A virus H3N2                         |
| 315643 | 11689620 | pos | MHC I | GILGFVFTLT  | 51 chromium release                   | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 315643 | 11689620 | pos | MHC I | GILGFVFTLT  | 51 chromium release                   | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 315643 | 11689620 | pos | MHC I | CVNGSCFTV   | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 315643 | 11689620 | pos | MHC I | CVNGSCFTV   | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 315643 | 11689620 | pos | MHC I | CVNGSCFTV   | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 315643 | 11689620 | pos | MHC I | CVNGSCFTV   | 51 chromium release                   | HLA-A*0201 | NA  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 841    | 11752149 | pos | MHC I | AIMDKNIL    | 51 chromium release                   | HLA-A*0201 | NS1 | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |
| 841    | 11752149 | pos | MHC I | CTELKLSDY   | intracellular cytokine staining (ICS) | HLA-A1     | NP  | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |
| 841    | 11752149 | pos | MHC I | CTELKLSDY   | 51 chromium release                   | HLA-A1     | NP  | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |
| 841    | 11752149 | pos | MHC I | VSDGGPNLY   | 51 chromium release                   | HLA-A1     | PB1 | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |
| 841    | 11752149 | pos | MHC I | ILRGSVAHK   | 51 chromium release                   | HLA-A3     | NP  | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |
| 841    | 11752149 | pos | MHC I | SRYWAIRTR   | 51 chromium release                   | HLA-B*2705 | NP  | Influenza A virus H3N2 (A/Resvir-9 (H3N2))     |

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|         |          |     |       |             |                                       |            |    |   |
|---------|----------|-----|-------|-------------|---------------------------------------|------------|----|---|
| 841     | 11752149 | pos | MHC I | GILGFVFTL   | 51 chromium release                   | HLA-B*3501 | M1 | Influenza A virus H3N2 (A/Resvir-9 (H3N2))      |
| 841     | 11752149 | pos | MHC I | RRSGAAGAAVK | 51 chromium release                   | HLA-B27    | NP | Influenza A virus H3N2 (A/Resvir-9 (H3N2))      |
| 841     | 11752149 | pos | MHC I | ELRSRYWAI   | 51 chromium release                   | HLA-B8     | NP | Influenza A virus H3N2 (A/Resvir-9 (H3N2))      |
| 782     | 11836437 | pos | MHC I | LPFDKSTIM   | ELISPOT                               | HLA-B*3501 | NP | Influenza A virus (A/Victoria/3/1975(H3N2))     |
| 782     | 11836437 | pos | MHC I | LPFDKSTIM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus (A/Victoria/3/1975(H3N2))     |
| 782     | 11836437 | pos | MHC I | LPFDKPTIM   | ELISPOT                               | HLA-B*3501 | NP | Influenza A virus H3N2                          |
| 782     | 11836437 | pos | MHC I | LPFDKPTIM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus H3N2                          |
| 782     | 11836437 | pos | MHC I | LPFEKSTVM   | ELISPOT                               | HLA-B*3501 | NP | Influenza A virus H3N2 (A/Resvir-9 (H3N2))      |
| 782     | 11836437 | pos | MHC I | LPFEKSTVM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus H3N2 (A/Resvir-9 (H3N2))      |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKPTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/nt/60/1968(H3N2))          |
| 674     | 14764717 | pos | MHC I | LPFDKSTIM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 674     | 14764717 | pos | MHC I | LPFDKSTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 674     | 14764717 | pos | MHC I | LPFDKSTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 674     | 14764717 | pos | MHC I | LPFDKSTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 674     | 14764717 | pos | MHC I | LPFEKSTVM   | 51 chromium release                   | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | pos | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFEKSTVM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Shanghai/16/1989(H3N2))    |
| 674     | 14764717 | neg | MHC I | LPFDKSTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 674     | 14764717 | neg | MHC I | LPFDKSTIM   | MHC tetramer/multimer staining        | HLA-B*3501 | NP | Influenza A virus (A/Texas/1/1977(H3N2))        |
| 1177    | 15113903 | neg | MHC I | SGYWAIRTR   | intracellular cytokine staining (ICS) | HLA-B*2705 | NP | Influenza A virus (A/Netherlands/018/94 (H3N2)) |
| 1000374 | 15163496 | pos | MHC I | SRYWAIRTR   | 51 chromium release                   | HLA-B*2705 | NP | Influenza A virus (A/Hong Kong/2/68(H3N2))      |

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|         |          |     |        |                      |                     |            |     |  |
|---------|----------|-----|--------|----------------------|---------------------|------------|-----|--|
| 1000374 | 15163496 | pos | MHC I  | SRYWAIRTR            | 51 chromium release | HLA-B*2705 | NP  | Influenza A virus (A/Hong Kong/2/68(H3N2))         |
| 1000374 | 15163496 | pos | MHC I  | LPFDKTTIM            | 51 chromium release | HLA-B*3501 | NP  | Influenza A virus (A/Hong Kong/2/68(H3N2))         |
| 1000374 | 15163496 | pos | MHC I  | LPFDKTTIM            | 51 chromium release | HLA-B*3501 | NP  | Influenza A virus (A/Hong Kong/2/68(H3N2))         |
| 1000374 | 15163496 | pos | MHC I  | ELRSRYWAI            | 51 chromium release | HLA-B8     | NP  | Influenza A virus (A/Hong Kong/2/68(H3N2))         |
| 1000374 | 15163496 | pos | MHC I  | ELRSRYWAI            | 51 chromium release | HLA-B8     | NP  | Influenza A virus (A/Hong Kong/2/68(H3N2))         |
| 1000158 | 16054612 | pos | MHC I  | RRATAILRK            | ELISPOT             | HLA-B*2705 | PB2 | Influenza A virus (A/X-31(H3N2))                   |
| 1000158 | 16054612 | pos | MHC I  | KRYGPALSI            | ELISPOT             | HLA-B*2705 | PB2 | Influenza A virus (A/X-31(H3N2))                   |
| 1000158 | 16054612 | pos | MHC I  | RRSFEIKKL            | ELISPOT             | HLA-B*2705 | PB1 | Influenza A virus (A/X-31(H3N2))                   |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFS            | ELISPOT             | HLA-B*4002 | NP  | Influenza A virus (A/Bilthoven/4791/81(H3N2))      |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFS            | 51 chromium release | HLA-B*4002 | NP  | Influenza A virus (A/Bilthoven/4791/81(H3N2))      |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFS            | ELISPOT             | HLA-B*4002 | NP  | Influenza A virus (A/Bilthoven/4791/81(H3N2))      |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFL            | ELISPOT             | HLA-B*4002 | NP  | Influenza A virus H3N2 (A/Netherlands/9/03 (H3N2)) |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFL            | 51 chromium release | HLA-B*4002 | NP  | Influenza A virus H3N2 (A/Netherlands/9/03 (H3N2)) |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFL            | ELISPOT             | HLA-B*4002 | NP  | Influenza A virus H3N2 (A/Netherlands/9/03 (H3N2)) |
| 1003542 | 17251571 | pos | MHC I  | AEIEDLIFL            | 51 chromium release | HLA-B*4002 | NP  | Influenza A virus H3N2 (A/Netherlands/9/03 (H3N2)) |
| 1007681 | 17507491 | pos | MHC II | TYADTICIGYHANNSTDT   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | VLEKNVTVTHSVNLLLED   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | VTHSVNLLLED SHNGKLCL | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | KLCLLKGIAPLQLGNCSV   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | IAPLQLGNCSVAGWILGN   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | NCSVAGWILGNPECELLI   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | ELLISKESWSYIVETPNP   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | SWSYIVETPNPENGTCYP   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | TPNPENGTCYPGYFADYE   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | TCYPGYFADYEELREQLS   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | EQLSSVSSFERFEIFPKE   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | SFERFEIFPKESSWPNHT   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | FPKESSWPNHTVTGVSAS   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | NGKSSFYRNLLWLTGKNG   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | RNLLWLTGKNGLYPNLSK   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | NNKEKEVLVLWGVHHPN    | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | HPPNIGNQRALYHTENAY   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | QRALYHTENAYVSVSSH    | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | GDTIIFEANGNLIAPWYA   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | ANGNLIAPWYAFALSRGF   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | MDECDAKCQTPQGAINSS   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | CQTPQGAINSSLPFQNVH   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | QNVHPVTIGECPKYVRS    | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |
| 1007681 | 17507491 | pos | MHC II | IGECPKYVRS AKLRMVTG  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1))  |

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|         |          |     |        |                     |         |         |    |   |
|---------|----------|-----|--------|---------------------|---------|---------|----|---|
| 1007681 | 17507491 | pos | MHC II | VRSAKLRMVTGLRNIPSI  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | pos | MHC II | TGMVDGWYGYHHQNEQGS  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | pos | MHC II | NKVNSVIEKMNTQFTAVG  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | pos | MHC II | WTYNAELLVLENERTLD   | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | pos | MHC II | LVLLENERTLDFHDSNVK  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | pos | MHC II | YHKCNNECMESVKNGTYD  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | MKAKLLVLLCTFTATYAD  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | LLCTFTATYADTICIGYH  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | IGYHANNSTDTVDTVLEK  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | ILGNPECELLISKESWSY  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | ADYEELREQLSSVSSFER  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | PNHTVTGVSASC SHNGKS | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | VSASC SHNGKSSFYRNLL | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GKNGLYPNLSKSYVNNKE  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | NLSKSYVNNKEKVLVLW   | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | LVLWGVHHPNIGNQRAL   | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | ENAYVSVVSSHYSRRFTP  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | KRPKVRDQEGRINYYWTL  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | QEGRINYYWTLLEPGDTI  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | YWTLEPGDTIIFEANGN   | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | PWYAFALSRGFGSGIITS  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | IITSNAPMDECDAKCQTP  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | INSSLPFQNVHPVTIGEC  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | MVTGLRNIPSIQSRGLFG  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | IPSIQSRGLFGAIAGFIE  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GLFGAIAGFIEGGWTGMV  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GFIEGGWTGMVDGWYGYH  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | YGYHHQNEQGSGYAADQK  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | NAINGITNKVNSVIEKMN  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | EKMNTQFTAVGKEFNKLE  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | TAVGKEFNKLERRMENLN  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | NKLERRMENLNKKVDDGF  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | ENLNKKVDDGFLDIWTYN  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | DDGFLDIWTYNAELLVLL  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | RTLDFHDSNVKNLYEKVK  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | SNVKNLYEKVKSQKLNNA  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | EKVKSQKLNNAKEIGNGC  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | KNNAKEIGNGCFFEYHKC  | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GNGCFEYHKCNNECMES   | ELISPOT | HLA-DR1 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |

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|         |          |     |        |                       |                                       |               |    |   |
|---------|----------|-----|--------|-----------------------|---------------------------------------|---------------|----|---|
| 1007681 | 17507491 | neg | MHC II | CMESVKNQTYDYPKYSEE    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GTYDYPKYSEESKLNREK    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | NREKIDGVKLESMGVYQI    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | VKLESMGVYQILAIYSTV    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | YSTVASSLVLLVSLGAIS    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1007681 | 17507491 | neg | MHC II | GAISFWMCSNGSLQCRIC    | ELISPOT                               | HLA-DR1       | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD      | MHC tetramer/multimer staining        | HLA-DRB1*0101 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD      | intracellular cytokine staining (ICS) | HLA-DRB1*0101 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD      | intracellular cytokine staining (ICS) | HLA-DRB1*0101 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | SGPLKAEIAQKLEDVFAGKN  | MHC tetramer/multimer staining        | HLA-DRB1*0101 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH  | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | RMVLSAFDERRNRYLEEHP   | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ERRNRYLEEHP           | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | PRMCSLMQGSTLPRRSGAAG  | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | GVGTMVMELIRMIKRGINDR  | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | SLVGIDPFRLQNSQVFSLI   | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ASAGQISVQPTFSVQRNL    | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | RTEIIRMMESARPEDVSFQ   | MHC tetramer/multimer staining        | HLA-DRB1*0101 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | GVTNKVNSIIDKMNTQFEAV  | MHC tetramer/multimer staining        | HLA-DRB1*0301 | HA | Influenza A virus (A/Viet Nam/1194/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | PTIKRSYNNTNQEDL       | MHC tetramer/multimer staining        | HLA-DRB1*0404 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD      | MHC tetramer/multimer staining        | HLA-DRB1*0404 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | TLTVPSEGLQRRRFVQNAL   | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | GLQRRRFVQNALNGNDPNN   | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | VKLYKCLKREITFHGAKEVA  | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | TGALASCMGLIYNRMGTVTT  | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | EAMEIANQARQMVQAMRTIG  | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | ARQMVMQAMRTIGTHPNSSAG | MHC tetramer/multimer staining        | HLA-DRB1*0404 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | NNILRTQESECACVNGSCFT  | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1009685 | 18209073 | pos | MHC II | TNSRSGFEMIWDPNGWETD   | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |

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|         |          |     |        |                      |                                       |               |    |  |
|---------|----------|-----|--------|----------------------|---------------------------------------|---------------|----|--|
| 1009685 | 18209073 | pos | MHC II | GRPKESTIWTSGSSISFCGV | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | NPAHKSQLVWMACHSAAFED | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ASAGQISVQPTFSVQRNLPF | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | TEGRTSDMRTEIIRMMESAR | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | RTEIIRMMESARPEDVSFQG | MHC tetramer/multimer staining        | HLA-DRB1*0404 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | LEKKHNGKLCDLGVKPLIL  | MHC tetramer/multimer staining        | HLA-DRB1*0701 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD     | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ELLVLMENERTLDFHD     | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | TYVLSIIPSGPLKAEIAQKL | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | AGKNTDLEALMEWLKTRPIL | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ALMEWLKTRPILSPLTKGIL | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | VKLYKCLKREITFHGAKEVA | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHRQMATITNPLIRHENRMV | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | TNPLIRHENRMVLASTTAKA | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | NRMVLASTTAKAMEQMAGSS | MHC tetramer/multimer staining        | HLA-DRB1*0701 | M1 | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | PINGWAVYSKDNSIRIGSKG | MHC tetramer/multimer staining        | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | PINGWAVYSKDNSIRIGSKG | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | PINGWAVYSKDNSIRIGSKG | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | MHC tetramer/multimer staining        | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | SHLECRTFFLTQGALLNDKH | intracellular cytokine staining (ICS) | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | FLTQGALLNDKHSNGTVKDR | MHC tetramer/multimer staining        | HLA-DRB1*0701 | NA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | MIWHSNLNDATYQRTRALVR | MHC tetramer/multimer staining        | HLA-DRB1*0701 | NP | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |

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|         |          |     |        |                       |                                |               |     |  |
|---------|----------|-----|--------|-----------------------|--------------------------------|---------------|-----|--|
| 1009685 | 18209073 | pos | MHC II | DATYQRTRALVRTGMDPRMC  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | IFLARSALILRGSAVHKSCSL | MHC tetramer/multimer staining | HLA-DRB1*0701 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ILRGSAVHKSCLPACVYGLA  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | NPAHKSQVLVWMACHSAAFED | MHC tetramer/multimer staining | HLA-DRB1*0701 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | VKLYKCLKREITFHGAKEVA  | MHC tetramer/multimer staining | HLA-DRB1*1101 | M1  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | TNPLIRHENRMVLASTTAKA  | MHC tetramer/multimer staining | HLA-DRB1*1101 | M1  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | EAMEIANQARQMVQAMRTIG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | M1  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | ARQMVQAMRTIGTHPNSSAG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | M1  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | GPSNGQASHKIFKMEKGKVV  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | HKIFKMEKGKVVKSVELDAP  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | TGLDCIRPCFWVELIRGRP   | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | CFWVELIRGRPKESTIWTSG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | VRELILYDKKEIRRIWRQAN  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | KEEIRRIWRQANNGEDATAG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | GVGTMVMELIRMIKRGINDR  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | LIRMIKRGINDRNFWRGENG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | NTLELRSRYWAIRTRSGGNT  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NP  | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1009685 | 18209073 | pos | MHC II | GFLDVWVTYNAELLVLMENER | MHC tetramer/multimer staining | HLA-DRB1*1501 | HA  | Influenza A virus (A/Viet Nam/1194/2004(H5N1)) |
| 1012379 | 18353950 | pos | MHC I  | GILGFVFTL             | ELISPOT                        | HLA-A*0201    | M1  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | GMLGFVFTL             | ELISPOT                        | HLA-A*0201    | M1  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | AIMDKNIIL             | ELISPOT                        | HLA-A*0201    | NS1 | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | CTELKLSDY             | ELISPOT                        | HLA-A1        | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | ILRGSAVHK             | ELISPOT                        | HLA-A3        | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | ILRGSAHK              | ELISPOT                        | HLA-A3        | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | RRSGAAGAAVK           | ELISPOT                        | HLA-B*2705    | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | RRSGAAGAAIK           | ELISPOT                        | HLA-B*2705    | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | LPFEKSTVM             | ELISPOT                        | HLA-B*3501    | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | LPFERATIM             | ELISPOT                        | HLA-B*3501    | NP  | H5N1 subtype                                   |
| 1012379 | 18353950 | pos | MHC I  | LPFERSTIM             | ELISPOT                        | HLA-B*3501    | NP  | H5N1 subtype                                   |
| 1013468 | 18614638 | pos | MHC I  | GILGFVFTL             | ELISPOT                        | HLA-A*0201    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |
| 1013468 | 18614638 | pos | MHC I  | GILGFVFTL             | 51 chromium release            | HLA-A*0201    | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1)) |



## Homan and Bremel, Supporting Materials

|         |          |     |        |                    |                     |            |     |   |
|---------|----------|-----|--------|--------------------|---------------------|------------|-----|---|
| 1013468 | 18614638 | pos | MHC I  | GILGFVFTL          | 51 chromium release | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013468 | 18614638 | pos | MHC I  | SGPLKAEIAQRLEDV    | 51 chromium release | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013468 | 18614638 | pos | MHC I  | SGPLKAEIAQRLEDV    | 51 chromium release | HLA-A*0201 | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013468 | 18614638 | pos | MHC I  | AIMDKNIIL          | 51 chromium release | HLA-A*0201 | NS1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013468 | 18614638 | pos | MHC I  | AIMDKNIIL          | 51 chromium release | HLA-A*0201 | NS1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013935 | 19122146 | pos | MHC I  | LPFDRTTVM          | ELISPOT             | HLA-B*0702 | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013935 | 19122146 | pos | MHC I  | SPIVPSFDM          | ELISPOT             | HLA-B*0702 | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1013935 | 19122146 | pos | MHC I  | QPEWFRNVL          | ELISPOT             | HLA-B*0702 | PB1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019632 | 19386707 | pos | MHC II | VTHSVNLLLEDSHNGKL  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | SSFERFEIFPKESSWPN  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | EIFPKESSWPNHTVTGV  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | GKSSFYRNLLWLTGKNG  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | RNLLWLTGKNGLYPNLS  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | NQRALYHTENAYVSVVS  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | LEPGDTIIFEANGNLIA  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | IIFEANGNLIAPWYAF   | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | GNLIAPWYAFALSRGFG  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | SGYAADQKSTQNAINGI  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | VIEKMNTQFTAVGKEFN  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | WTYNAELLVLENERTLD  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | LVLLENERTLDFHDSNVK | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | ESMGVYQILAIYSTVAS  | ELISPOT             | HLA-DR1    | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | MNPNQKIITIGISIAI   | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | SSLCSISGWAIYTKDN   | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | DVFIREFPFISCSHLE   | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | RTFFLTQGALLNDKHSN  | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | GTVKDRSPYRALMSCPL  | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | KIEKGKVTKSIELNA    | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | GKVTKSIELNAPNFHYE  | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | WVSFNQNLDYQIGYICS  | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | NLDYQIGYICSGVFGD   | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | GVKGFSYKYGNVWIGR   | ELISPOT             | HLA-DR1    | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | pos | MHC II | IRASVGRMIGGIGRFYI  | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | ERRNKYLEEHPSAGKDP  | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | RGINDRNFWRGENGRKT  | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | NFWRGENGRKTRIAAYER | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | EIEDLTFLARSALILRG  | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | GVDPFKLLQTSQVYSLI  | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | VYSLIRPNENPAHKSQ   | ELISPOT             | HLA-DR1    | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |

## Homan and Bremel, Supporting Materials

|         |          |     |        |                     |         |         |     |   |
|---------|----------|-----|--------|---------------------|---------|---------|-----|---|
| 1019632 | 19386707 | pos | MHC II | HKSQLVWMACNSAAFED   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | TLELRSRYWAI TRSGG   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | RYWAI TRSGGNTNQQR   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | TNQQRASAGQISTQPTF   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | SAGQISTQPTFSVQRNL   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | SDMRAEIIKMMESARPE   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | IIKMMESARPEEVSFQG   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | ESDEAFKMTMASALASR   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | KMTMASALASRYLTDMT   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | ALASRYLTDMTIEEMSR   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | WFMLMPKQKVAGPLCVR   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | DQAIMDKNIILKANFSV   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | KNIILKANFSVIFDRLE   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | ANFSVIFDRLETLTLR    | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | LTLRAFTEEGAI VGEI   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | FTEEGAI VGEISPLPSL  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | VKNAIGVLIGGLEWNDN   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | RSSNETGGPPFTPTQKR   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | GGPPFTPTQKRKMAGTI   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | PTQKRKMAGTIRSEV     | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | pos | MHC II | WTYNAELLVLMENERTLD  | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | LVL MENERTLDFHDSNVK | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | MNP NKIITIGSICMVT   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | SSLCPINGWAVYSKDN    | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | KMEKGKVVKSVELDA     | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | NLEYQIGYICSGVFGD    | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | pos | MHC II | EMIWDPNGWTETDSSFS   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/Vietnam/1203/2004(H5N1))     |
| 1019632 | 19386707 | neg | MHC II | DTVDTVLEKNVTVTHSV   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | NLLED SHNGKLC LLKGI | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | LLKGIAPLQLGNCSVAG   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | CSVAGWILGNPECELLI   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | ILGNPECELLISKESWS   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | KESWSYIVETPNPENG T  | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | EQLSSVSSFERFEIFPK   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | SYVNNKEKEVLVLWGVH   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | PPNIGNQRALYHTENAY   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | HTENAYVSVSSHYSRR    | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | HYSRRFTPEIAKRPKVR   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | TPEIAKRPKVRDQEGRI   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |

## Homan and Bremel, Supporting Materials

|         |          |     |        |                    |         |         |     |   |
|---------|----------|-----|--------|--------------------|---------|---------|-----|---|
| 1019632 | 19386707 | neg | MHC II | SSLPFQNVHPVTIGCECP | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | HQNEQGSYAADQKSTQ   | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | KYSEESKLNREKIDGVK  | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | YQILAIYSTVASSLVLL  | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | SLVLLVSLGAISFWMCS  | ELISPOT | HLA-DR1 | HA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | TNVVAGKDKTSVTLAGN  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | GWLTIGISGPDNGAVAV  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | RTQESECVCVNGSCFTI  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | TDGPSNGAASYKIFKIE  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | IELNAPNFHYEESCYP   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | NFHYEESCYPDTGTVM   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | TGTVMCVCARDNWHGSR  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | HGSRNPWVSFNQLDYQ   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | RPKDGEGSCNPVTVDA   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | YKYGNVWIGRTKSNRL   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | VWIGRTKSNRLRKFEM   | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | VVAITDWSGYSGSFVQH  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | NTTIWTSGSSISFCGVN  | ELISPOT | HLA-DR1 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019632 | 19386707 | neg | MHC II | MDSHTVSSFQVDCFLWH  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | SSFQVDCFLWHVRKQVA  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | CFLWHVRKQVADQDLGD  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | RKQVADQDLGDAPFLDR  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | APFLDRLRRDQKSLKGR  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | LRRDQKSLKGRGSTLGL  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | SLKGRGSTLGLNIETAT  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | STLGLNIETATCVGKQI  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | IETATCVGKQIVERILK  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | LTDMTIEEMSRDWFMLM  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | PLCVRMDQAIMDKNIL   | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | VLIGGLEWNDNTVRVSE  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | EWNDNTVRVSETLQRFA  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | LQRFAWRSSNETGGPPF  | ELISPOT | HLA-DR1 | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | MASQGTKRSEYQMETDG  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | LNDYEGRLIQNSLTIER  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | RLIQNSLTIERMVLAF   | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | AGKDPKKTGGPIYKRVD  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | RQANNGGDATAGLTHIM  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | LTHIMIWHNSLNDTTYQ  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019632 | 19386707 | neg | MHC II | DTTYQRTRALVRTGMDP  | ELISPOT | HLA-DR1 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |

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|         |          |     |        |                      |                                |                        |    |  |
|---------|----------|-----|--------|----------------------|--------------------------------|------------------------|----|--|
| 1019632 | 19386707 | neg | MHC II | AAVKGVGTMVLELIRMI    | ELISPOT                        | HLA-DR1                | NP | Influenza A virus (A/New York/348/2003(H1N1))  |
| 1019632 | 19386707 | neg | MHC II | LPACVYGPAVASGYDFE    | ELISPOT                        | HLA-DR1                | NP | Influenza A virus (A/New York/348/2003(H1N1))  |
| 1019632 | 19386707 | neg | MHC II | GYDFEKEGYSLVGVDPF    | ELISPOT                        | HLA-DR1                | NP | Influenza A virus (A/New York/348/2003(H1N1))  |
| 1019632 | 19386707 | neg | MHC II | AAFEDLRVSSFIRGTRV    | ELISPOT                        | HLA-DR1                | NP | Influenza A virus (A/New York/348/2003(H1N1))  |
| 1019632 | 19386707 | neg | MHC II | DMSNEGSYFFGDNAEEY    | ELISPOT                        | HLA-DR1                | NP | Influenza A virus (A/New York/348/2003(H1N1))  |
| 1018856 | 19446935 | pos | MHC II | DQICIGYHANNSTEQVDTIM | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | DQICIGYHANNSTEQVDTIM | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LCDLDGVKPLILRDCSVAGW | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LCDLDGVKPLILRDCSVAGW | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LCDLDGVKPLILRDCSVAGW | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LCDLDGVKPLILRDCSVAGW | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LSRINHFEKIQIPKSSWSS  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LSRINHFEKIQIPKSSWSS  | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | LSRINHFEKIQIPKSSWSS  | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | KNSTYPTIKRSYNNTNQEDL | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | GSGYAADKESTQKAIDGVTN | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | GSGYAADKESTQKAIDGVTN | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | GSGYAADKESTQKAIDGVTN | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | NAELLVLMENERTLDFHDSN | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | NAELLVLMENERTLDFHDSN | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | pos | MHC II | NAELLVLMENERTLDFHDSN | 3H-thymidine                   | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | MEKIVLLFAIVSLVKSDQIC | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | AIVSLVKSDQICIGYHANN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | ANNSTEQVDTIMEKNVTVTH | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | DTIMEKNVTVTHAQDILEKK | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | TVTHAQDILEKKHNGKLCDL | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LEKKHNGKLCDLDGKPLIL  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | PLILRDCSVAGWLLGNPMCD | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | VAGWLLGNPMCDEFINPEW  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |

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|         |          |     |        |                       |                                |                        |    |  |
|---------|----------|-----|--------|-----------------------|--------------------------------|------------------------|----|--|
| 1018856 | 19446935 | neg | MHC II | PMCDEFINVPEWSYIVEKAN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | VPEWSYIVEKANPVNDLCYP  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | EKANPVNDLCYPGDFNDYEE  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LCYPGDFNDYEELKHLLSRI  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | DYEELKHLLSRINHFEDIQI  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | KIQIIPKSSWSSHEASLGV   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | SWSSHEASLGVSSACPYQGK  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LGVSSACPYQGKSSFFRNVV  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | YQGKSSFFRNVVWLKKNST   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | RNVVWLKKNSTYPTIKRSY   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | KRSYNNNTNQEDLLVLWGIHH | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | QEDLLVLWGIHPNDAAEQT   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | GIHHPNDAAEQTKLYQNPTT  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | AEQTKLYQNPTTYISVGTST  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NPTTYISVGTSTLNQRLVPR  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | GTSTLNQRLVPRIATRSKVN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LVPRIATRSKVNQSGRMEF   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | SKVNGQSGRMEFFWTILKPN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | RMEFFWTILKPNDAINFESN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LKPNDAINFESNGNFIAPEY  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | FESNGNFIAPEYAYKIVKKG  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | APEYAYKIVKKG DSTIMKSE | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | VKKG DSTIMKSELEYGNCNT | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | MKSELEYGNCNTKCQTPMGA  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NCNTKCQTPMGAINSSMPFH  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | PMGAINSSMPFHNIHPLTIG  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | MPFHNIHPLTIG ECPKYVKS | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |

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|         |          |     |        |                       |                                |                        |    |  |
|---------|----------|-----|--------|-----------------------|--------------------------------|------------------------|----|--|
| 1018856 | 19446935 | neg | MHC II | LTIGECPKYVKS NRLVLATG | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | YVKS NRLVLATGLRNSPQRE | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | LATGLRNSPQRERRRKRGL   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | PQRERRRKRGLFGAIAGFI   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | KRGLFGAIAGFIEGGWQGMV  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | AGFIEGGWQGMVDGWYGYHH  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | QGMVDGWYGYHHSNEQSGSY  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | GYHHSNEQSGSYAADKESTQ  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | ESTQKAIDGVTNKVNSIIDK  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | GVTNKVNSIIDKMNTQFEAV  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | IIDKMNTQFEAVGREFNLE   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | FEAVGREFNLERRIENLNK   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NNLERRIENLNKKMEDGFLD  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NLNKKMEDGFLDVWTYNAEL  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | GFLDVWTYNAELLVLMENER  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NAELLVLENERTLDFHDSN   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | H1N1 subtype                                   |
| 1018856 | 19446935 | neg | MHC II | NAELLVLENERTLDFHDSN   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | H1N1 subtype                                   |
| 1018856 | 19446935 | neg | MHC II | NAELLVLMENERTLDFHDSN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | ENERTLDFHDSNVKNLYDKV  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | HDSNVKNLYDKVRLQLRDNA  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | YDKVRLQLRDNAKELGNGCF  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | RDNAKELGNGCFEFYHKCDN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | NGCFEFYHKCDNECMESVRN  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | KCDNECMESVRNGTYDYPQY  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | SVRNGTYDYPQYSEEARLKR  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | YPQYSEEARLKREEISGVKL  | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |
| 1018856 | 19446935 | neg | MHC II | RLKREEISGVKLESIGYQI   | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA | Influenza A virus (A/Viet Nam/1203/2004(H5N1)) |

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|         |          |     |        |                      |                                |                        |     |   |
|---------|----------|-----|--------|----------------------|--------------------------------|------------------------|-----|---|
| 1018856 | 19446935 | neg | MHC II | GVKLESIGIYQILSIYSTVA | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1018856 | 19446935 | neg | MHC II | IYQILSIYSTVASSLALAIM | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1018856 | 19446935 | neg | MHC II | STVASSLALAIMVAGLSLWM | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1018856 | 19446935 | neg | MHC II | LAIMVAGLSLWMCSNGSLQC | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1018856 | 19446935 | neg | MHC II | SLWMCSNGSLQCRICI     | MHC tetramer/multimer staining | HLA-DRA*0101/DRB1*0401 | HA  | Influenza A virus (A/Viet Nam/1203/2004(H5N1))    |
| 1019592 | 19524006 | pos | MHC I  | LTKGILGFVFTLTPSE     | ELISPOT                        | HLA-A*0201             | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC I  | ISIAIGIISLMLQIGNI    | ELISPOT                        | HLA-A*0201             | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019592 | 19524006 | pos | MHC I  | DQAIMDKNIILKANFSV    | ELISPOT                        | HLA-A*0201             | NS1 | Influenza A virus (A/New York/444/2001(H1N1))     |
| 1019592 | 19524006 | pos | MHC I  | PPNFSCIENFRAYVDGF    | ELISPOT                        | HLA-A*0201             | PA  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC I  | GMMMGMFNMMLSTVLGVS   | ELISPOT                        | HLA-A*0201             | PB1 | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC I  | FLARSALILRGSVAHKS    | ELISPOT                        | HLA-A3                 | NP  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC I  | AGALASCMGLIYNRMGA    | ELISPOT                        | HLA-B*3501             | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | LIAPRGYFKIRSGKSSI    | ELISPOT                        | HLA-DR                 | HA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019592 | 19524006 | pos | MHC II | YFKIRSGKSSIMRSDAP    | ELISPOT                        | HLA-DR                 | HA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019592 | 19524006 | pos | MHC II | CPRYVKQNTLKLATGMR    | ELISPOT                        | HLA-DR                 | HA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019592 | 19524006 | pos | MHC II | NNMDRAVKLYRKLKREI    | ELISPOT                        | HLA-DR                 | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | VKLYRKLKREITFHGAK    | ELISPOT                        | HLA-DR                 | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | RQMVTTTNPLIRHENRM    | ELISPOT                        | HLA-DR                 | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | LIAPRGYFKIRSGKSSI    | 51 chromium release            | HLA-DR1                | HA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019592 | 19524006 | pos | MHC II | SIVPSGPLKAEIAQRLE    | ELISPOT                        | HLA-DRB1*0101          | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | SIVPSGPLKAEIAQRLE    | ELISPOT                        | HLA-DRB1*1501          | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | TNPLIRHENRMVLA       | ELISPOT                        | HLA-DRB1*1501          | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | TNPLIRHENRMVLA       | ELISPOT                        | HLA-DRB5               | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | KAMEQMAGSSEQAAEAM    | ELISPOT                        | HLA-DRB5               | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1019592 | 19524006 | pos | MHC II | GLKNDLLENLQAYQKRM    | ELISPOT                        | HLA-DRB5               | M1  | Influenza A virus (A/New York/348/2003(H1N1))     |
| 1016566 | 19553306 | pos | MHC I  | LPFDKSTVM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype                                      |
| 1016566 | 19553306 | pos | MHC I  | LPFDKTTIM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype Influenza A/Oklahoma/7485/01         |
| 1016566 | 19553306 | pos | MHC I  | LPFDRTTVM            | ELISPOT                        | HLA-B*0702             | NP  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1016566 | 19553306 | pos | MHC I  | LPFDRPTIM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype                                      |
| 1016566 | 19553306 | pos | MHC I  | LPFDKATIM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype                                      |
| 1016566 | 19553306 | pos | MHC I  | LPFDKSTIM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype                                      |
| 1016566 | 19553306 | pos | MHC I  | LPFDRTTIM            | ELISPOT                        | HLA-B*0702             | NP  | H1N1 subtype                                      |
| 1019112 | 19830726 | pos | MHC II | TNPLIRHENRMVLA       | MHC tetramer/multimer staining | HLA-DRB1*0301          | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019112 | 19830726 | pos | MHC II | VLMEWLKTRPILSPLTKGIL | MHC tetramer/multimer staining | HLA-DRB1*1101          | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019112 | 19830726 | pos | MHC II | VKLYRKLKREITFHGAKEIS | MHC tetramer/multimer staining | HLA-DRB1*1101          | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019112 | 19830726 | pos | MHC II | EAMEVASQARQMVQAMRTIG | MHC tetramer/multimer staining | HLA-DRB1*1101          | M1  | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |

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|         |          |     |        | staining             |                                       |               |    |   |
|---------|----------|-----|--------|----------------------|---------------------------------------|---------------|----|---|
| 1019205 | 20060099 | pos | MHC I  | GILGFVFTL            | intracellular cytokine staining (ICS) | HLA-A*0201    | M1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019205 | 20060099 | pos | MHC I  | GILGFVFTL            | in vivo assay                         | HLA-A*0201    | M1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019205 | 20060099 | pos | MHC I  | GILGFVFTL            | challenge assay                       | HLA-A*0201    | M1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019205 | 20060099 | pos | MHC I  | GILGFVFTL            | challenge assay                       | HLA-A*0201    | M1 | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | QRALYHTENAYVSVVS     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | IIFEANGNLIAPWYAF     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | TGLRNIPSIQSRGLFGAIA  | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | SVIEKMNTQFTAVGKE     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | ELLVLENERTLDFHDS     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | ELLVLENERTLDFHDS     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | ELLVLENERTLDFHDS     | ELISPOT                               | HLA-DRB1*0401 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | ELLVLENERTLDYHDS     | 3H-thymidine                          | HLA-DRB1*0401 | HA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | ELLVLENERTLDYHDS     | ELISPOT                               | HLA-DRB1*0401 | HA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | TYVLSIIPSGPLKAEIAQRL | 3H-thymidine                          | HLA-DRB1*0401 | M1 | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | TYVLSIIPSGPLKAEIAQRL | ELISPOT                               | HLA-DRB1*0401 | M1 | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | TYVLSIVPSGPLKAEIAQRL | 3H-thymidine                          | HLA-DRB1*0401 | M1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | TYVLSIVPSGPLKAEIAQRL | 3H-thymidine                          | HLA-DRB1*0401 | M1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | TYVLSIVPSGPLKAEIAQRL | ELISPOT                               | HLA-DRB1*0401 | M1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | ILGFVFTLTPSERG       | 3H-thymidine                          | HLA-DRB1*0401 | M1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GWAIYSKDNSVRIGSKG    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GWAIYSKDNSVRIGSKG    | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GWAIYTKDNSIRIGSKG    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GWAIYTKDNSIRIGSKG    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GWAIYTKDNSIRIGSKG    | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GQASYKIFRIEKGKIVK    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GQASYKIFRIEKGKIVK    | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GAASYKIFKIEKGKVTK    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GAASYKIFKIEKGKVTK    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GAASYKIFKIEKGKVTK    | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GFEMIWDPNGWGTGTDN    | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GFEMIWDPNGWGTGTDN    | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | GFEMIWDPNGWTDTDS     | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GFEMIWDPNGWTDTDS     | 3H-thymidine                          | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GFEMIWDPNGWTDTDS     | ELISPOT                               | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | NPAHKSQLVWMACNSAAFED | 3H-thymidine                          | HLA-DRB1*0401 | NP | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | NPAHKSQLVWMACNSAAFED | 3H-thymidine                          | HLA-DRB1*0401 | NP | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | NPAHKSQLVWMACNSAAFED | ELISPOT                               | HLA-DRB1*0401 | NP | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | RTEVIRMMESAKPEDLSFQ  | 3H-thymidine                          | HLA-DRB1*0401 | NP | Influenza A virus (A/California/04/2009(H1N1))    |



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|         |          |     |        |                      |                                |               |     |   |
|---------|----------|-----|--------|----------------------|--------------------------------|---------------|-----|---|
| 1019526 | 20071564 | pos | MHC II | RTEVIRMMESAKPEDLSFQ  | ELISPOT                        | HLA-DRB1*0401 | NP  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | RAEIIMMESARPEEVSFQ   | 3H-thymidine                   | HLA-DRB1*0401 | NP  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | RAEIIMMESARPEEVSFQ   | 3H-thymidine                   | HLA-DRB1*0401 | NP  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | RAEIIMMESARPEEVSFQ   | ELISPOT                        | HLA-DRB1*0401 | NP  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | NPAHKSQLVWMACHSAAFEI | 3H-thymidine                   | HLA-DRB1*0401 | NP  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | NPAHKSQLVWMACHSAAFEI | ELISPOT                        | HLA-DRB1*0401 | NP  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019526 | 20071564 | pos | MHC II | TGTGYTMDTVNRTHQ      | 3H-thymidine                   | HLA-DRB1*0401 | PB1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | KLANVVRKMMTNSQDTE    | 3H-thymidine                   | HLA-DRB1*0401 | PB1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019526 | 20071564 | pos | MHC II | GMFNMSTVLGVLSILNLGQ  | 3H-thymidine                   | HLA-DRB1*0401 | PB1 | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 |          | pos | MHC II | MNPNQKIIIGSVCMTI     | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 |          | pos | MHC II | LECRTFFLTQGALLNDK    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 |          | pos | MHC II | YKIFRIEKGKIVKSVEM    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 |          | pos | MHC II | EKGKIVKSVEMNAPNYH    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 |          | pos | MHC II | NQNLEYQIGYICSGIFG    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019566 |          | pos | MHC II | TLAGNSSLCSISGWAYI    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | CSHLECRTFFLTQGALL    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | RTFFLTQGALLNDKHSN    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | GAASYKIFKIEKGVTK     | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | IFKIEKGVTKSIELNA     | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | KGFEMIWDPNGWTDTDSD   | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | DCIRPCFWVELVRGLPR    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | YQFALGQGTTLNNVHSN    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | WSKEILRTQESEVCVCI    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | CVCINGTCTVMTDGSAA    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | GKADTKILFIEEGKIVH    | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | NRSGYSGIFSVGKSCI     | MHC tetramer/multimer staining | HLA-DRB1*0101 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | GWAIYTKDNSIRIGSKG    | MHC tetramer/multimer staining | HLA-DRB1*0301 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | FCGVNSDTANWSWPDGA    | MHC tetramer/multimer staining | HLA-DRB1*0301 | NA  | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 |          | pos | MHC II | GFAPFSKDNSIRLSAGG    | MHC tetramer/multimer staining | HLA-DRB1*0301 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 |          | pos | MHC II | TDGSASGKADTKILFIE    | MHC tetramer/multimer staining | HLA-DRB1*0301 | NA  | Influenza A virus (A/New York/384/2005(H3N2))     |

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|         |     |        |                    |                                |               |    |   |
|---------|-----|--------|--------------------|--------------------------------|---------------|----|---|
| 1016040 | pos | MHC II | GTMVMELVRMIKRG I   | MHC tetramer/multimer staining | HLA-DRB1*0301 | NP | Influenza A virus (A/Puerto Rico/8/1934(H1N1))    |
| 1020782 | pos | MHC II | WAIYSKDNSVRIGSKGD  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | IITDTIKSWRNILRTQ   | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | KSWRNNILRTQESECAC  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | ILRTQESECACVNGSCF  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | SNGQASYKIFRIEKGKI  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | SRNGFEMIWDPNGWTGT  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019566 | pos | MHC II | GWAIYTKDNSIRIGSKG  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | GAVAVLKYNGIITETIK  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | GAASYKIFKIEKGVTK   | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | KSNRLRKG FEMIWDPNG | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | KGFEMIWDPNGWTD TDS | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | GFAPFSKDNSIRLSAGG  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | TCTVVM TDGSASGKADT | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | GKIVHTSTLSGSAQHVE  | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | NRSGYSGIFSV EKGSCI | MHC tetramer/multimer staining | HLA-DRB1*0401 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1020782 | pos | MHC II | MNPNQKIITIGSV CMTI | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | IISLMLQIGNIISIWAS  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | LQIGNIISIWASHSIQT  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | KSNRLRKG FEMIWDPNG | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | KGFEMIWDPNGWTD TDS | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | FSVKQDVVAITDWSGYS  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | VVAITDWSGYSGSFVQH  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | NTTIWTS GSSISFCGVN | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | MNPNQKIITIGSVSLTI  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | GQGTTLNNVHSNDTVHD  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | ILFIEEGKIVHTSTLSG  | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |

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|         |     |        |                   |                                |               |    |   |
|---------|-----|--------|-------------------|--------------------------------|---------------|----|---|
| 1019566 | pos | MHC II | GKIVHTSTLSGSAQHVE | MHC tetramer/multimer staining | HLA-DRB1*0404 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1020782 | pos | MHC II | QIGNIISIWISHSIQLG | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | FSFKYGNVWIGRTKSI  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | NGVWIGRTKSISSRNGF | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | LECRTFFLTQGALLNDK | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | MNPNQKIITIGSVCMTI | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | MNPNQKIITIGSVCMTI | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | WAIYSKDNSVRIGSKGD | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | GWAIYTKDNSIRIGSKG | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | CSHLECRTFFLTQGALL | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | RTFFLTQGALLNDKHSN | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | GAVAVLKYNGIITETIK | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | IFKIEKGKVTKSIELNA | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | YKYGNVWIGRTKSNRL  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | VWIGRTKSNRLRKFEM  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | DDGNDVWMGRTISEKLR | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | WMGRTISEKLRSYETF  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | EETEVLWTSNSIVFCG  | MHC tetramer/multimer staining | HLA-DRB1*0701 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1020782 | pos | MHC II | GSKGDVFVIREPFISCS | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | FVIREPFISCSPLECRT | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | NGVWIGRTKSISSRNGF | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | SNGQASYKIFRIEKGKI | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | YKIFRIEKGKIVKSVEM | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | DVFVIREPFISCSHLE  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | GAASYKIFKIEKGKGTK | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | DCIRPCFWVELVRGLPR | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | FWVELVRGLPRENTTIW | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |

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|         |     |        |                    |                                |               |    |   |
|---------|-----|--------|--------------------|--------------------------------|---------------|----|---|
| 1020782 | pos | MHC II | RTFFLTQGALLNDKHSN  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1019566 | pos | MHC II | GKADTKILFIEEGKIVH  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | ILFIEEGKIVHTSTLSG  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | SEKLRSGYETFVKVIEGW | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1019566 | pos | MHC II | RCFYVELIRGRKEETEV  | MHC tetramer/multimer staining | HLA-DRB1*1101 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |
| 1016040 | pos | MHC II | RALYHTENAYVSVVS    | MHC tetramer/multimer staining | HLA-DRB1*1501 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1016040 | pos | MHC II | GNLIAPWYAFALSRG    | MHC tetramer/multimer staining | HLA-DRB1*1501 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1016040 | pos | MHC II | DGFLDIWTYNAELLV    | MHC tetramer/multimer staining | HLA-DRB1*1501 | HA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1016040 | pos | MHC II | SRLNWLTHLKYKYP     | MHC tetramer/multimer staining | HLA-DRB1*1501 | HA | Influenza A virus (A/Wyoming/03/2003(H3N2))       |
| 1020782 | pos | MHC II | DNGAVAVLKYNGIITDT  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | VLKYNGIITDTIKSWRN  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | IITDTIKSWRNILRTQ   | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | KSWRNILRTQESECAC   | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | MNPNQKIITIGSVCMTI  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | QIGNIISIWISHSIQLG  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | VCNQRIITYENSTWVNH  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | CVCVNGSCFTIMTDGPS  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | GAVAVLKYNGIITETIK  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | LQIGNIISIWASHSIQT  | MHC tetramer/multimer staining | HLA-DRB1*1501 | NA | Influenza A virus (A/New Caledonia/20/1999(H1N1)) |
| 1020782 | pos | MHC II | LDCIRPCFWVELIRGRP  | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | CFWVELIRGRPKENTIW  | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | EKGKIVKSVEMNAPNYH  | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | GSKGDVFIREFPISCS   | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | LECRFFLTQGALLNDK   | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1020782 | pos | MHC II | YKIFRIEKGKIVKSVEM  | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/California/04/2009(H1N1))    |
| 1019566 | pos | MHC II | RCFYVELIRGRKEETEV  | MHC tetramer/multimer staining | HLA-DRB5*0101 | NA | Influenza A virus (A/New York/384/2005(H3N2))     |