**Figure S1**. CBA kit cytokine data for serum samples from *Patient 4* **(A)** compared to healthy control samples. **(B)** The x-axis for *Patient 4* shows the days since the NVP HSR (NVP stop date). The Y axis shows pg/ml of cytokine detected. Blue bars - IL-2, orange bars - IL-4, grey bars - IL-6, dark blue bars - TNF, green bars - IFN, IL-17a - navy blue bars.

**Table S1.** Haplotype data for NVP HSR patients with NVP induced INF response for patients 1,2,3 and 4.

|  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Patient*** | ***HLA-A*** | ***HLA-A*** | ***HLA-B*** | ***HLA-B*** | ***HLA-C*** | ***HLA-C*** | ***HLA-DRB1*** | ***HLA-DRB1*** | ***HLA-DQB1*** | ***HLA-DQB1*** | ***Ethnicity*** | ***INF response: SFU/Million cells (Days post HSR)*** |
| ***1#*** | 24:07 | 24:10 | **35:30** | 38:02 | **04:01** | 07:02 | 12:01 | 15:02^ | 05:02 | 05:02 | SEA | 115 SFU (6), 235 SFU (61),285 SFU(81), 225 SFU (90) and 870 SFU (144) |
| ***2*** | 11:01 | 24:02 | **35:01** | 13:01 | 03:04 | **04:01** | 11:01 | 16:01 | 03:01 | 05:02 | SEA | 400 SFU (97) and 20 SFU (476) |
| ***3*** | 02:06 | 34:01 | 15:21 | 56:01 | **04:03** | 07:01 | 04:06 | 15:02^ |  |  | SEA | 300 SFU (2) and 45 SFU (62) |
| ***4*** | 29:02 | 31 | **14:01\*** | 44:03 | **08:02** | 16:01 | 07:01 | 07:01 | 02:02 | 02:02 | C | 1600 SFU (5), 150 SFU (8), 40 SFU (18), 0 SFU (49) |
| *5* | 02 | 30 | 18:01 | **58:01\*** | 07:04 | 07:04 | 08:02 | 15:01^ | 04:02 | 05:01 | SEA |
| *6* | 11 | 24 | **35:01** | 39:06 | **04** | 07:02 | **01:01** | 08:01 | - | - | C |
| *7* | 01 | 02 | 08:01 | 27:01 | 07 | 02:02 | **01:01** | 03:01 | 01 | 02 | C |
| *8* | 02 | 31 | 27:05 | 44:02 | 01:02 | 05:01 | **01:01** | **01:01** | 05:01 | 05:01 | C |
| *9* | *01* | 01 | *08:01* | 50:01 | *07* | 06:02 | *03:01* | 04:01 | 03 | 03 | C |
| *10* | 03:01 | 11:01 | **35:01** | 40:02 | 02:02 | **04:01** | 04:01 | 11:01 | 03 | 03 | C |
| *11* | 03:01 | 33:01 | **14:02\*** | 57:01 | 06:02 | **08:02** | 03:01 | 07:01 | 02:01 | 03:03 | C |
| *12* | 02:01 | 02:01 | 13:02 | 15:01 | 03:03 | 06:02 | 15:01^ | 07:01 | 02 | 06:02 | C |
| *13* | *01:01* | *01:01* | *08:01* | *08:01* | *07* | *07* | *03:01* | *03:01* | 02:01 | 02:01 | C |
| *14* | *01:01* | 24:02 | *08:01* | 39:06 | *07:02* | 07:02 | *03:01* | 08:01 | 02:01 | 04:02 | C |
| *15* | 24 | 24:07 | 15:02 | 38:02 | 07:02 | **08:01** | 15:02^ | 12:02 | 03:01 | 05:01 | SEA |
| *16* | 02:03 | 24:07 | 15:02 | 40:01 | **04:03** | **08:01** | 14:01 | 15:01^ | 05:03 | 06:01 | SEA |
| *17* | 02 | 03 | **35:01** | 15:01 | 03:03 | **04:01** | **01:01** | 04:01 | 03:02 | 05:01 | C |
| *18* | 03 | 24 | 51:01 | 56:01 | 01:02 | 15:06 | **01:01** | **01:01** | 05:01 | 05:01 | C |
| *19* | 03:01 | 11:01 | **35:01** | 51:01 | **04:01** | 14:02 | **01:01** | 11:04 | 03:01 | 05:01 | C |
| *C=Caucasian, SEA=South East Asian.* *\*HLA allele was found significant in other published studies [13, 14],* *#Re-challenged with NVP after initial HSR reaction.* |  |

**Table S2.** HLA allele frequencies for NVP hypersensitive and tolerant individuals, and frequency ranges observed in comparable ethnic groups

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **HLA allele** | **DRB1\*01:01** | **B\*35:01** | **Cw\*04** | **Cw\*08** |
|  | **Caucasian** | **SE Asian** | **Caucasian** | **SE Asian** | **Caucasian** | **SE Asian** | **Caucasian** | **SE Asian** |
| **NVP HSR** | 0.346 | 0.000 | 0.154 | 0.167 | 0.154 | 0.333 | 0.077 | 0.167 |
| **Tolerant** | 0.073 | 0.045 | 0.054 | 0.000 | 0.094 | 0.136 | 0.044 | 0.000 |
| **Reference range\*** | 0.08-0.13 | 0.00-0.04 | 0.05-0.10 | 0.00-0.07 | 0.01-0.20 | 0.00-0.18 | 0.00-0.07 | 0.00-0.18 |

*\*Reference range is taken from global distribution plots for Europeans and South East Asians (*[*www.allelefrequencies.net*](http://www.allelefrequencies.net)*) where n ≥ 100.*