**Supplementary Table 1.** Results of relative sensitivity analysis for Model AB

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Metabolite | k0 | KM D27 | D27 | kcat D27A | KM CCD7 | CCD7 | KM CCD8 | CCD8 | kcat CCD8 | KM MAX1 | Vmax MAX1 |  | k |
| BCAR | 1 | 1 | -1 | -1 |  |  |  |  |  |  |  |  |  |
| CISB | 1 |  |  |  | 1 | -1 |  |  |  |  |  |  |  |
| CTNL | 1.5 |  |  |  |  |  | 1 | -1.5 | -1.5 |  |  |  |  |
| CL | 1 |  |  |  |  |  |  |  |  | 1 | -1 |  |  |
| ORO | 1 |  |  |  |  |  |  |  |  |  |  | 1 | -1 |
| STR | 1 |  |  |  |  |  |  |  |  |  |  | -1 | -1 |