

**Table S1.** Glycosyl types of protopanaxadiol (PPD) saponins

<b>Ginsenoside types</b>	<b>R1 persad</b>	<b>R2 persad</b>	<b>R3 persad</b>	<b>Molecular formula</b>
Ginsenoside F2	-Glc	-Glc	-OH	C <sub>42</sub> H <sub>72</sub> O <sub>15</sub>
Ginsenoside Rb3	-Glc2-1Glc	-Glc6-1Xy1	-OH	C <sub>53</sub> H <sub>90</sub> O <sub>22</sub>
Ginsenoside Ra1	-Glc2-1Glc6-Mal	-Glc6-1Ara(p)4- 1Xy1	-OH	C <sub>58</sub> H <sub>98</sub> O <sub>26</sub>
Ginsenoside Ra2	-Glc2-1Glc6-Mal	-Glc6-1Ara(f)4-1Xy1	-OH	C <sub>58</sub> H <sub>98</sub> O <sub>26</sub>
(20S)-Ginsenoside Rg3	-Glc2-1Glc	-H:20(S)	-OH	C <sub>42</sub> H <sub>72</sub> O <sub>13</sub>
(20R)-GinsenosideRg3	-Glc2-1Glc	-H:20(R)	-OH	C <sub>42</sub> H <sub>72</sub> O <sub>13</sub>
(20S)-GinsenosideRg3	-Glc	-H:20(S)	-OH	C <sub>36</sub> H <sub>62</sub> O <sub>8</sub>
(20R)-GinsenosideRh2	-Glc	-H:20(R)	-OH	C <sub>36</sub> H <sub>62</sub> O <sub>8</sub>
Ginsenoside Rs1	-Glc2-1Glc6-Ac	-Glc6-1Ara(p)	-OH	C <sub>55</sub> H <sub>92</sub> O <sub>23</sub>
Ginsenoside Rd	-Glc2-1Glc	-Glc	-OH	C <sub>48</sub> H <sub>82</sub> O <sub>18</sub>
Ginsenoside Rb2	-Glc2-1Glc	-Glc6-1Ara(p)	-OH	C <sub>53</sub> H <sub>90</sub> O <sub>22</sub>
Ginsenoside Rb1	-Glc2-1Glc	-Glc6-1Xy1	-OH	C <sub>53</sub> H <sub>90</sub> O <sub>22</sub>
Ginsenoside Rc	-Glc2-1Glc	-Glc6-1Ara(f)	-OH	C <sub>53</sub> H <sub>90</sub> O <sub>22</sub>
Ginsenoside XVII	-Glc	-Glc6-1Glc	-OH	C <sub>48</sub> H <sub>82</sub> O <sub>20</sub>
Noto-ginsenoside Fe	-Glc	-Glc6-1Ara(f)	-OH	C <sub>47</sub> H <sub>80</sub> O <sub>17</sub>

**Table S2.** Glycosyl types of protopanaxatriol (PPT) saponins

Ginsenoside types	R1 perssad	R2 perssad	R3 perssad	Molecular formula
Ginsenoside F1	-H	-Glc	-H	C <sub>36</sub> H <sub>62</sub> O <sub>9</sub>
Ginsenoside F3	-H	-Glc6-1Ara(p)	-H	C <sub>53</sub> H <sub>92</sub> O <sub>24</sub>
Ginsenoside Ia	-H	-Glc	-Glc	C <sub>42</sub> H <sub>72</sub> O <sub>14</sub>
Ginsenoside Re	-Glc2-1Rha	-Glc	-H	C <sub>48</sub> H <sub>82</sub> O <sub>18</sub>
Ginsenoside Rg1	-Glc	-Glc	-H	C <sub>42</sub> H <sub>72</sub> O <sub>14</sub>
(20S)-Ginsenoside Rg2	-Glc2-1Rha	-H:20(S)	-H	C <sub>42</sub> H <sub>72</sub> O <sub>13</sub>
(20R)-Ginsenoside Rg2	-Glc2-1Rha	-H:20(R)	-H	C <sub>42</sub> H <sub>72</sub> O <sub>13</sub>
(20S)-Ginsenoside Rh1	-Glc	-H:20(S)	-H	C <sub>36</sub> H <sub>62</sub> O <sub>9</sub>
(20R)-Ginsenoside Rh1	-Glc	-H:20(R)	-H	C <sub>36</sub> H <sub>62</sub> O <sub>9</sub>
Vina-ginsenoside R1	=O	-H	-OH	C <sub>41</sub> H <sub>70</sub> O <sub>13</sub>
Pseudo-ginsenoside F11	=O	-H	-OH	C <sub>42</sub> H <sub>72</sub> O <sub>14</sub>