

## Plant Cultured Cell Lines Preserved in RIKEN BRC\*

| Plant name          | Cell line   | BRC No.                  | Species                                 | Specific features (provided by the depositors)  | Medium type | Restriction** |
|---------------------|-------------|--------------------------|---|---|-------------|---------------|
| Amaranth            | H440        | <a href="#">rpc00065</a> | <i>Amaranthus</i>                       | Cells maintained without plant hormones, betacyanin production (dark red)   | gellan gum  |               |
| <i>Arabidopsis</i>  | T87         | <a href="#">rpc00008</a> | <i>Arabidopsis thaliana</i>             | Accession Columbia, partial chloroplast development under the light condition   | liquid      |               |
|                     | YG1         | <a href="#">rpc00050</a> | <i>Arabidopsis thaliana</i>             | Accession Columbia, cells maintained under the dark condition   | liquid      | b             |
|                     | gnom        | <a href="#">rpc00055</a> | <i>Arabidopsis thaliana</i>             | Cell line derived from <i>gnom</i> mutant   | agar        | a             |
|                     | At tom      | <a href="#">rpc00056</a> | <i>Arabidopsis thaliana</i>             | Accession Columbia <i>tom1</i> (EMS) <i>tom3</i> (EMS) <i>th1</i> (T-DNA) triple mutant, inhibition of tobamovirus multiplication | liquid      | b             |
|                     | MM2d        | <a href="#">rpc00103</a> | <i>Arabidopsis thaliana</i>             | Cell cycle synchronization, genetic transformation  | liquid      | a             |
|                     | MM2d-LS     | <a href="#">rpc00104</a> | <i>Arabidopsis thaliana</i>             | MM2d-derived cell line, Cell cycle synchronization, genetic transformation [preparing]  | liquid      | a             |
|                     | YG1-c       | <a href="#">rpc00111</a> | <i>Arabidopsis thaliana</i>             | Callus cell line derived from YG1 suspension cell line, cells maintained under the dark condition                                 | gellan gum  |               |
|                     | At tom-c    | <a href="#">rpc00112</a> | <i>Arabidopsis thaliana</i>             | Callus cell line derived from At tom suspension cell line, inhibition of tobamovirus multiplication                               | gellan gum  |               |
| <i>Asparagus</i>    | A.pas       | <a href="#">rpc00023</a> | <i>Asparagus pastorianus</i>            | –   | agar        |               |
|                     | A.per       | <a href="#">rpc00022</a> | <i>Asparagus persicus</i>               | –   | agar        |               |
|                     | A.plo       | <a href="#">rpc00024</a> | <i>Asparagus plocamoides</i>            | –   | agar        |               |
|                     | Asp-86      | <a href="#">rpc00010</a> | <i>Asparagus officinalis</i>            | [not available]   | agar        |               |
| <i>Athyrium</i>     | AY-01       | <a href="#">rpc00100</a> | <i>Athyrium yokoscense</i>              | Fern cell line, high cadmium tolerance  | liquid      |               |
| Bamboo              | Pb          | <a href="#">rpc00048</a> | <i>Phyllostachys bambusoides</i>        | High accumulation of $\beta$ -1,3-glucan in cell wall   | liquid      |               |
|                     | Pn          | <a href="#">rpc00047</a> | <i>Phyllostachys nigra</i>              | High accumulation of $\beta$ -1,3-glucan in cell wall   | liquid      |               |
| <i>Bruguiera</i>    | BsLs        | <a href="#">rpc00087</a> | <i>Bruguiera sexangula</i>              | Suspension cell line derived from a mangrove species, high salt tolerance   | liquid      |               |
| Carrot              | kurodagosun | <a href="#">rpc00002</a> | <i>Daucus carota</i>                    | Embryogenic cells   | liquid      |               |
|                     | NC          | <a href="#">rpc00101</a> | <i>Daucus carota</i>                    | Non-embryogenic cells   | liquid      |               |
| <i>Ceratopteris</i> | Cr-AH       | <a href="#">rpc00102</a> | <i>Ceratopteris richardii</i>           | Fern cell line  | liquid      | a + b         |
| Cherry tree         | Co460       | <a href="#">rpc00053</a> | <i>Prunus</i> $\times$ <i>yedoensis</i> | Cells maintained without plant hormones, anthocyanin production (dark red)  | gellan gum  |               |
| <i>Commelina</i>    | TA416       | <a href="#">rpc00068</a> | <i>Commelina communis</i>               | Cells maintained without plant hormones, anthocyanin production (dark blue)   | gellan gum  |               |

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|-----------------|-----------|--------------------------|-----------------------------------|---|-------------|---------------|
| <i>Coptis</i>   | Cj        | <a href="#">rpc00054</a> | <i>Coptis japonica</i>            | High berberine production and accumulation in vacuoles  | agar        |               |
|                 | 156-S     | <a href="#">rpc00069</a> | <i>Coptis japonica</i>            | Transgenic cell line over-expressing <i>Coptis SMT</i> gene, high berberine production (yellow) | liquid      |               |
| Dandelion       | ToF       | <a href="#">rpc00064</a> | <i>Taraxacum officinale</i>       | Anthocyanin production (dark purple)  | agar        |               |
| <i>Duboisia</i> | Dm        | <a href="#">rpc00059</a> | <i>Duboisia myoporoides</i>       | Naringenin glycosylation, tropine acetylation, conversion of L-rhamnose to D-glucose            | agar        |               |
| <i>Glehnia</i>  | GIW       | <a href="#">rpc00057</a> | <i>Glehnia littoralis</i>         | Anthocyanin-non-producing (white) cells, production of coumarin derivatives by stress treatment | agar        |               |
| <i>Glehnia</i>  | GIV       | <a href="#">rpc00058</a> | <i>Glehnia littoralis</i>         | Anthocyanin-producing (violet) cells, production of coumarin derivatives                        | agar        |               |
| Grape           | VR        | <a href="#">rpc00003</a> | <i>Vitis</i>                      | High anthocyanin production   | agar        |               |
|                 | VW        | <a href="#">rpc00004</a> | <i>Vitis</i>                      | Low anthocyanin production  | agar        |               |
|                 | YU-1      | <a href="#">rpc00049</a> | <i>Vitis vinifera</i>             | Vigorous cell growth  | liquid      | b             |
|                 | YU-1-c    | <a href="#">rpc00110</a> | <i>Vitis vinifera</i>             | Callus cell line derived from YU-1 suspension cell line, vigorous cell growth                   | gellan gum  |               |
| Liquorice       | Ge        | <a href="#">rpc00060</a> | <i>Glycyrrhiza echinata</i>       | Retrochalcone production (yellow) by elicitor treatment   | agar        |               |
|                 | Ak-1      | <a href="#">rpc00061</a> | <i>Glycyrrhiza echinata</i>       | Medicarpin production by elicitor treatment   | agar        |               |
| <i>Lotus</i>    | Lj        | <a href="#">rpc00032</a> | <i>Lotus japonicus</i>            | [preparing]   | liquid      |               |
|                 | LjA       | <a href="#">rpc00033</a> | <i>Lotus japonicus</i>            | –   | agar        |               |
|                 | LjmA      | <a href="#">rpc00034</a> | <i>Lotus japonicus</i>            | –   | agar        |               |
| Mint            | Mar-1     | <a href="#">rpc00013</a> | <i>Mentha arvensis</i>            | High alkaline phosphodiesterase activity  | agar        |               |
| Peach           | P468      | <a href="#">rpc00066</a> | <i>Prunus persica</i>             | Cells maintained without plant hormones, anthocyanin production (dark red)                      | gellan gum  |               |
| Periwinkle      | CRA       | <a href="#">rpc00014</a> | <i>Catharanthus roseus</i>        | –   | liquid      |               |
|                 | V208      | <a href="#">rpc00015</a> | <i>Catharanthus roseus</i>        | Crown gall cells ( <i>Agrobacterium tumefaciens</i> A208), brassinosteroid production           | liquid      |               |
| Pokeweed        | PAR       | <a href="#">rpc00005</a> | <i>Phytolacca americana</i>       | High betacyanin production (red)  | agar        |               |
|                 | PAP       | <a href="#">rpc00006</a> | <i>Phytolacca americana</i>       | Moderate betacyanin production (pink)   | agar        |               |
|                 | PAW       | <a href="#">rpc00007</a> | <i>Phytolacca americana</i>       | Low betacyanin production (white)   | agar        |               |
| Puccoon         | M18-1     | <a href="#">rpc00037</a> | <i>Lithospermum erythrorhizon</i> | High shikonin production  | agar        |               |
|                 | OM        | <a href="#">rpc00038</a> | <i>Lithospermum erythrorhizon</i> | Low shikonin production   | agar        |               |
| Rice            | OS-1      | <a href="#">rpc00020</a> | <i>Oryza sativa</i>               | –   | agar        |               |

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|--------------|--------------------------|--------------------------|--|--|-------------|---------------|
|              | Oc                       | <a href="#">rpc00031</a> | <i>Oryza sativa</i>                      | Cells used for nurse culture, phyto-sulphokine- $\alpha$ production, high capacity to convert IAM to IAA | liquid      |               |
| Sesame       | PSB                      | <a href="#">rpc00025</a> | <i>Sesamum indicum</i>                   | –  | agar        |               |
|              | PSW                      | <a href="#">rpc00026</a> | <i>Sesamum indicum</i>                   | –  | agar        |               |
|              | PSG                      | <a href="#">rpc00027</a> | <i>Sesamum indicum</i>                   | –  | agar        |               |
| Soybean      | DG330                    | <a href="#">rpc00051</a> | <i>Glycine max</i>                       | Cells maintained without plant hormones, daidzein and genistein production                               | gellan gum  |               |
| Spinach      | Spi-WT                   | <a href="#">rpc00016</a> | <i>Spinacia oleracea</i>                 | –  | liquid      |               |
|              | Spi-I-1                  | <a href="#">rpc00017</a> | <i>Spinacia oleracea</i>                 | Nitrate reductase deficiency   | agar        |               |
|              | Spi-12F                  | <a href="#">rpc00018</a> | <i>Spinacia oleracea</i>                 | Nitrate reductase deficiency   | liquid      |               |
| Sponge gourd | LcyD6                    | <a href="#">rpc00028</a> | <i>Luffa cylindrica</i>                  | –  | agar        |               |
|              | LcyD7                    | <a href="#">rpc00029</a> | <i>Luffa cylindrica</i>                  | –  | agar        |               |
|              | Lcy-1                    | <a href="#">rpc00019</a> | <i>Luffa cylindrica</i>                  | [not available]  | agar        |               |
| Strawberry   | SB489                    | <a href="#">rpc00067</a> | <i>Fragaria</i> $\times$ <i>ananassa</i> | Cells maintained without plant hormones, anthocyanin production (dark red)                               | gellan gum  |               |
| Tobacco      | G89                      | <a href="#">rpc00044</a> | <i>Nicotiana glauca</i>                  | –  | agar        |               |
|              | BY-2                     | <a href="#">rpc00001</a> | <i>Nicotiana tabacum</i>                 | Rapid cell proliferation   | liquid      |               |
|              | T-13                     | <a href="#">rpc00009</a> | <i>Nicotiana tabacum</i>                 | Coumarin production  | liquid      |               |
|              | Xan-1                    | <a href="#">rpc00035</a> | <i>Nicotiana tabacum</i>                 | –  | agar        |               |
|              | BY-2H                    | <a href="#">rpc00036</a> | <i>Nicotiana tabacum</i>                 | Habituated BY-2 cell line growing without plant hormones   | agar        |               |
|              | GV7                      | <a href="#">rpc00039</a> | <i>Nicotiana tabacum</i>                 | Transgenic BY-2 cell line expressing GFP-AtVAM3 that visualizes vacuolar membranes                       | liquid      | a             |
|              | GF11                     | <a href="#">rpc00040</a> | <i>Nicotiana tabacum</i>                 | Transgenic BY-2 cell line expressing GFP-AtFim1 that visualizes actin filaments                          | liquid      | a             |
|              | GT16                     | <a href="#">rpc00041</a> | <i>Nicotiana tabacum</i>                 | Transgenic BY-2 cell line expressing GFP-tubulin $\alpha$ that visualizes microtubules                   | liquid      | a             |
|              | TBY2-AtRER1B             | <a href="#">rpc00042</a> | <i>Nicotiana tabacum</i>                 | Transgenic BY-2 cell line expressing GFP-AtRer1B that visualizes Golgi bodies                            | gellan gum  |               |
|              | 3n-3                     | <a href="#">rpc00043</a> | <i>Nicotiana tabacum</i>                 | Crown gall cells ( <i>Agrobacterium tumefaciens</i> A208)  | agar        |               |
|              | BY-TIPG                  | <a href="#">rpc00062</a> | <i>Nicotiana tabacum</i>                 | Transgenic BY-2 cell line expressing NtTIP1;1-GFP that visualizes vacuolar membrane                      | liquid      | a             |
|              | NI                       | <a href="#">rpc00084</a> | <i>Nicotiana tabacum</i>                 | Photoautotrophic cell line   | liquid      |               |
|              | ATR-r                    | <a href="#">rpc00085</a> | <i>Nicotiana tabacum</i>                 | Atrazine- and 3-(3,4-dichlorophenyl)-1,1-dimethylurea-resistant NI cell line                             | liquid      |               |
| NaCl-r       | <a href="#">rpc00086</a> | <i>Nicotiana tabacum</i> | NaCl-adapted NI cell line                | liquid   |             |               |

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|               | TBY2-31/ST    | <a href="#">rpc00091</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing GFP-AtSYP31 and ST-mRFP that visualize <i>cis</i> - and <i>trans</i> -Golgi, respectively   | liquid      |               |
|               | TBY2-31/ST(E) | <a href="#">rpc00092</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing estradiol-inducible GFP-AtSYP31 and estradiol-inducible ST-mRFP that visualize <i>cis</i> - and <i>trans</i> -Golgi, respectively | liquid      |               |
|               | TBY2-41/ST    | <a href="#">rpc00093</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing GFP-AtSYP41 and ST-mRFP that visualize <i>trans</i> -Golgi network and <i>trans</i> -Golgi, respectively                          | liquid      |               |
|               | TBY2-R31      | <a href="#">rpc00095</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing mRFP-AtSYP31 that visualizes <i>cis</i> -Golgi  | liquid      |               |
|               | TBY2-31/41    | <a href="#">rpc00097</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing GFP-AtSYP31 and mRFP-AtSYP41 that visualize <i>cis</i> -Golgi and <i>trans</i> -Golgi network, respectively                       | liquid      |               |
|               | topless3-GFP  | <a href="#">rpc00098</a> | <i>Nicotiana tabacum</i>    | Transgenic BY-2 cell line expressing NtTPL3-GFP  | liquid      |               |
| Tomato        | Sly-1         | <a href="#">rpc00012</a> | <i>Solanum lycopersicum</i> | High alkaline phosphodiesterase activity [preparing]   | agar        |               |
|               | GCR26         | <a href="#">rpc00045</a> | <i>Solanum lycopersicum</i> | –  | liquid      | b             |
|               | GCR237        | <a href="#">rpc00046</a> | <i>Solanum lycopersicum</i> | Inhibition of viral RNA replication by plant resistance gene <i>Tm-1</i>   | liquid      |               |
| Turmeric      | Cl            | <a href="#">rpc00052</a> | <i>Curcuma longa</i>        | Rapid cell proliferation, yellow pigment accumulation  | agar        |               |
| <i>Vinca</i>  | Vma-1         | <a href="#">rpc00021</a> | <i>Vinca major</i>          | –  | agar        |               |
| Watermelon    | Cba-1         | <a href="#">rpc00011</a> | <i>Citrullus battich</i>    | High alkaline phosphodiesterase activity   | agar        |               |
| <i>Zinnia</i> | ZE3           | <a href="#">rpc00030</a> | <i>Zinnia elegans</i>       | –  | agar        |               |

\* Web catalog: [https://plant.rtc.riken.jp/resource/cell\\_line/cell\\_line\\_list.html](https://plant.rtc.riken.jp/resource/cell_line/cell_line_list.html)

\*\* The details are provided on the webpage of each cell line in the web catalog. **a**: Not-for-profit academic purpose only **b**: Domestic only

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