

## Y-79 Cells | 300382

### General information

<b>Description</b>	The Y79 line was isolated by T.W. Reid and associates in January 1971 by explant culture of a primary tumor from the right eye obtained immediately after enucleation. The donor had a strong maternal family history of retinoblastoma. Ultrastructural features including nuclear membrane infoldings, triple membrane structures, microtubules, large coated vesicles, centrioles, basal bodies and annulate lamellae were reportedly similar to those of the original tumor.
<b>Organism</b>	Human
<b>Tissue</b>	Retina
<b>Disease</b>	Retinoblastoma
<b>Synonyms</b>	Y79, GM01232, GM01232E

### Characteristics

<b>Age</b>	2,5 years
<b>Gender</b>	Female
<b>Ethnicity</b>	Caucasian
<b>Morphology</b>	Multicellular clusters
<b>Growth properties</b>	Clusters in Suspension

### Identifiers / Biosafety / Citation

<b>Citation</b>	Y-79 (Cyton catalog number 300382)
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<b>Biosafety level</b>	1
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### Expression / Mutation

<b>Isoenzymes</b>	PGM1, 1, G6PD, B, ES-D, 1, AK-1, 1, GLO-1, 2, Phenotype Frequency Product: 0.1373
<b>Reverse transcriptase</b>	Negative

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<b>Karyotype</b>	Hypertriploid, with abnormalities including dicentrics, breaks, pulverizations and minutes
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## Handling

<b>Culture Medium</b>	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO <sub>3</sub> (Cytion article number 820700a)
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<b>Medium supplements</b>	Supplement the medium with 10% FBS
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<b>Subculturing</b>	Maintain cultures by periodically adding or replacing the medium. Initiate cultures with a density of $2 \times 10^5$ cells/ml and keep the cell concentration within the range of $1 \times 10^5$ to $1 \times 10^6$ cells/ml for optimal growth.
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<b>Split ratio</b>	A ratio of 1:2 to 1:4 is recommended
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<b>Seeding density</b>	$1 \times 10^5$ cells/ml
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<b>Fluid renewal</b>	Every 3 days
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<b>Freeze medium</b>	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
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#### Handling of cryopreserved cultures

1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required.
3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains.
4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently.
6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. Optionally, skip centrifugation but remove any remaining freezing medium after 24 hours.
7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth.
8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

### Quality control / Genetic profile / HLA

#### Sterility

Mycoplasma contamination is excluded using both PCR-based assays and luminescence-based mycoplasma detection methods.

To ensure there is no bacterial, fungal, or yeast contamination, cell cultures are subjected to daily visual inspections.

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#### STR profile

**CSF1PO:** 11,12  
**D13S317:** 11,12  
**D16S539:** 13,14  
**D5S818:** 11,12  
**D7S820:** 8,9  
**TH01:** 6,9.3  
**TPOX:** 8  
**vWA:** 15,18  
**D3S1358:** 15,16  
**D21S11:** 30,32  
**D18S51:** 13,16  
**Penta E:** 13,18  
**Penta D:** 12  
**D8S1179:** 13,16  
**FGA:** 22

#### HLA alleles

**A\*:** 02:01:01  
**B\*:** 01.01.1900 16:01, 02.01.1900 03:01  
**C\*:** 03:04:01, 12:03:01  
**DRB1\*:** 01:01:01, 13:02:01  
**DQA1\*:** 01:01:01, 01:02:01  
**DQB1\*:** 05:01:01, 06:04:01  
**DPB1\*:** 03:01, 04:01  
**E:** 01:01, 01:03