

# Human Brain Tumor Cell lines

Part of the CLS cell bank

CLS Cell Lines Service



**Table 1: Human Brain cancer cell lines: Origin and General Characteristics**

Name of cell line	Cell type	Organism, Ethnicity	Age / Gender	Tissue / Disease	Morphology	Growth properties	CLS order no.
A-172 <sup>1, 15</sup>	Anaplastic Glioma cell line	Homo sapiens (Human) / Caucasian	53 / Male	Brain / Glioblastoma grade IV	Fibroblastoid	Monolayer, adherent	300108
CCF-STTG1 <sup>2</sup>	Astrocytoma cell line	Homo sapiens (Human) / Caucasian	68 / Female	Brain / Astrocytoma, grade IV	Long, bright cells	Adherent	300388
Gimen <sup>3</sup>	Neuroblastoma cell line	Homo sapiens (Human) / Caucasian	3.5 years / Female	Brain / Neuroblastoma stage IV	Epithelial	Adherent	300179
H4 <sup>4</sup>	Astrocytoma cell line (former classification: Neuroglioma)	Homo sapiens (Human) / Caucasian	37 / Male	Brain / Glioma	Epithelial	Adherent	300184
HBL-52 <sup>5</sup>	Meningioma cell line, grade I	Homo sapiens (Human) / Caucasian	47 / Female	Brain / Meningioma grade I	Epithelial	Adherent	300188
HROG02 <sup>6</sup>	Glioblastoma cell line, grade IV	Homo sapiens (Human) / Caucasian	68 / Male	Brain / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300931
HROG04 <sup>6</sup>	Glioblastoma cell line, grade IV	Homo sapiens (Human) / Caucasian	53 / Female	Brain, R, frontal / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300932
HROG05 <sup>6</sup>	Glioblastoma cell line, grade IV	Homo sapiens (Human) / Caucasian	60 / Female	Brain, L, temporal / Relapsed Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300940
HROG06 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	53 / Male	Brain, L, frontal / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300933
HROG07 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	55 / Male	Brain, R, temporoparietal / Relapsed Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300934
HROG10 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	74 / Male	Brain, R, temporal / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300935
HROG13 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	77 / Female	Brain, R, temporal / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300936
HROG15 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	56 / Male	Brain, R, parietal / Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300937
HROG17 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	70 / Male	Brain, L, parietooccipital / Relapsed Glioblastoma grade IV	Epithelial-fibroblastoid	Adherent 2D, in colonies	300938
HROG36 <sup>6</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	80 / Female	Brain, R, parietal / Glioblastoma grade III	Epithelial-fibroblastoid	Adherent 2D, in colonies	300939

Name of cell line	Cell type	Organism, Ethnicity	Age / Gender	Tissue / Disease	Morphology	Growth properties	CLS order no.
Hs683 <sup>7</sup>	Oligodendroglioma cell line	Homo sapiens (Human) / Caucasian	76 / Male	Brain, L, temporal / Glioma	Fibroblast	Adherent	300213
IMR-32 <sup>8</sup>	Neuroblastoma cell line	Homo sapiens (Human) / Caucasian	13 months / Male	Brain / Neuroblastoma	Fibroblast	Adherent	300148
Kelly <sup>9</sup>	Neuroblastoma cell line	Homo sapiens (Human) / Caucasian	--	Brain / Neuroblastoma	Fibroblast-like	Adherent	300317
NCH421K <sup>10</sup>	Stem Cell Like Glioblastoma cell line	Homo sapiens (Human) / Caucasian	66 / Male	Brain / Glioblastoma grade IV	Stem-cell like spheroids	Cluster in suspension, serum free media	300118
NCH612 <sup>11</sup>	Anaplastic Oligodendroglioma cell line	Homo sapiens (Human) / Caucasian	39 / Male	Brain / Oligodendroglioma grade °III, IDH1 mutant (R132H)	Stem-cell like spheroids	Cluster in suspension, serum free media	300121
NCH644 <sup>12</sup>	Stem Cell Like Glioblastoma cell line	Homo sapiens (Human) / Caucasian	66 / Female	Brain / Glioblastoma grade IV	Stem-cell like spheroids	Cluster in suspension, serum free media	300124
NCH690 <sup>13</sup>	Stem Cell Like Glioblastoma cell line	Homo sapiens (Human) / Caucasian	78 / Female	Brain / Gliosarcoma	Stem-cell like spheroids	Cluster in suspension, serum free media	300120
SH-SY5Y <sup>14</sup>	Neuroblastoma cell line, derived from metastatic site: Bone Marrow	Homo sapiens (Human) / Caucasian	4 / Female	Brain (from metastatic site: bone marrow)	Neuronal cells with neurites	Loosely adherent; form clumps at high cell density	300154
U-118 MG <sup>15</sup>	Glioblastoma cell line, Derivative of U-138 MG	Homo sapiens (Human) / Caucasian	50 / Male	Brain / Glioblastoma grade IV	Mixed	Adherent	300362
U-138 MG <sup>15</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	47 / Male	Brain / Glioblastoma	Polygonal	Adherent	300363
U-251 MG <sup>16</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	61 / Male	Brain / Glioblastoma grade III/ grade IV	Epithelial	Adherent	300385
U-343 MGa <sup>15</sup>	Glioblastoma cell line	Homo sapiens (Human) / Caucasian	-- / Male	Brain / Glioblastoma	Epithelial	Adherent	300365
U-87 MG <sup>15</sup>	Glioblastoma cell line, Cross-contaminated, Origin unknown	Homo sapiens (Human) / Caucasian	44 / Female	Brain / Glioblastoma	Epithelial	Adherent	300367

**Table 2: Human Brain cancer cell lines: Special Features**

Name of cell line	Cell type	Cell Marker	Tumor antigens	Mutations	Secretion of Cytokines	Ref ID in Cellosaurus <sup>17</sup>	CLS order no.
A-172 <sup>1,15</sup>	Human Anaplastic Glioma cell line	Aw24, B27, Bw51, S-100-, GFAP-				RRID:CVLL_0131	300108
CCF-STTG1 <sup>2</sup>	Human Astrocytoma cell line	GFAP-				RRID:CVCL_1118	300388
Gimen <sup>3</sup>	Human Neuroblastoma cell line					RRID:CVCL_1232	300179
H4 <sup>4</sup>	Human Astrocytoma cell line (former classification: Neuroglioma)	pGP9.5+, NeuN+, NSE-				RRID:CVCL_1239	300184
HBL-52 <sup>5</sup>	Human Meningioma cell line, grade I	Desmoplakin (DP), Plakophilin (PKP2), N-cadherin				RRID:CVCL_4220	300188
HROG02 <sup>6</sup>	Human Glioblastoma cell line, grade IV	HLA-A02+, MHC class I- IFN- $\gamma$ + IFN- $\gamma$ +, MHC class II- IFN- $\gamma$ + IFN- $\gamma$ -, ICAM-1+, $\beta$ -microglobulin+, HLA-E+, MIC A+, MIC-B-, nestin+, Vimentin+, S-100+, GBM+, BTSC+	EGFR+, HER2/Neu+, Survivin+, MAGE-1+, Tyrosinase+, RHAMM+, WT-1+, IL13Ra+	IDH 1&2 wt, TP53 R248Q, 4q12(PDGFR) amplified, K-Ras wt, B-RAF wt, PTEN-	IL-8 high, IL-6-, CEA-, TNF $\alpha$ -, TGF $\beta$ -	RRID:CVCL_4U38	300931
HROG04 <sup>6</sup>	Human Glioblastoma cell line, grade IV	HLA-A02+, MHC class I- IFN- $\gamma$ + IFN- $\gamma$ +, MHC class II- IFN- $\gamma$ + IFN- $\gamma$ -, $\beta$ -microglobulin+, HLA-E+, HLA-G-, MIC A-, MIC B-, ICAM-1+, nestin+, Vimentin+, S-100+, GBM+, BTSC+	EGFR+, HER2/Neu-, Survivin+, MAGE-1-, MART-1+ INF- $\gamma$ +, Tyrosinase+ INF- $\gamma$ +, RHAMM+ INF- $\gamma$ +, WT-1+, IL13Ra+	PTEN W274L, 9p212.3(CDKN2A) deleted	IL-8 high, IL-6-, CEA-, TNF $\alpha$ -, TGF $\beta$ +	RRID:CVCL_4U39	300932
HROG05 <sup>6</sup>	Human Glioblastoma cell line, grade IV	HLA-A02+, MHC class I- IFN- $\gamma$ + IFN- $\gamma$ +, MHC class II- IFN- $\gamma$ + IFN- $\gamma$ +, ICAM-1+, $\beta$ -microglobulin+, Beta-2-M+, HLA-E+, HLA-G low, MIC A low, MIC B-, GFAP+, nestin+, Vimentin+, S-100+, GBM+, BTSC+	EGFR+, HER2/Neu-, Survivin+, MAGE-1-, MART-1 low, Tyrosinase-, RHAMM low, WT-1+, IL13Ra-	IDH 1&2 wt, TP53 wt, K-Ras G12D, B-RAF wt, 4q12(PDGFR) amplified, PTEN P169S/del 212-229		RRID:CVCL_4U40	300940
HROG06 <sup>6</sup>	Human Glioblastoma cell line	HLA-A02+, MHC class I- IFN- $\gamma$ + IFN- $\gamma$ +, MHC class II- IFN- $\gamma$ + IFN- $\gamma$ +, $\beta$ -microglobulin+, HLA-E+, HLA-G+, MIC A+, MIC-B-, ICAM-1+, GFAP+; nestin+, vimentin+, S-100+, GBM+, BTSC+	EGFR+, HER2/neu-, Survivin+, MAGE-1 IFN- $\gamma$ +, MART-1- IFN- $\gamma$ +, Tyrosinase+, IFN- $\gamma$ +, RHAMM; IFN- $\gamma$ +, WT-1+, IL-13Ra-	IDH 1&2 <sup>wt</sup> , TP53 <sup>R273H, R306*</sup> , 4q12(PDGFR) amplified, K-Ras <sup>wt</sup> , B-RAF <sup>wt</sup> , PTEN <sup>(+1 at 126)</sup>	IL-8 <sup>high</sup> , IL-6 <sup>high</sup> , CEA-, TNF $\alpha$ -, TGF $\beta$ -	RRID:CVCL_4U41	300933

Name of cell line	Cell type	Cell Marker	Tumor antigens	Mutations	Secretion of Cytokines	Ref ID in Cellosaurus <sup>17</sup>	CLS order no.
HROG07 <sup>6</sup>	Human Glioblastoma cell line	GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup> , EGFR <sup>+</sup>		TP53 <sup>wt</sup> , PTEN <sup>wt</sup> , 9q21.3 (CDKN2A) deleted	IL-8 high, IL-6 <sup>-</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>	RRID:CVCL_4U42	300934
HROG10 <sup>6</sup>	Human Glioblastoma cell line	HLA-A02 <sup>+</sup> , MHC class I <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , MHC class II <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , $\beta$ -microglobulin <sup>+</sup> HLA-E <sup>+</sup> , HLA-G <sup>-</sup> , MIC A <sup>+</sup> , MIC-B <sup>-</sup> , ICAM-1 <sup>+</sup> , GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup>	EGFR <sup>+</sup> , HER2/neu <sup>+</sup> , Survivin <sup>+</sup> , MAGE-1 <sup>+</sup> IFN- $\gamma$ <sup>+</sup> , MART-1 <sup>+</sup> , Tyrosinase <sup>-</sup> , RHAMM <sup>+</sup> IFN- $\gamma$ <sup>+</sup> , WT-1 <sup>+</sup> IFN- $\gamma$ <sup>+</sup> , IL-13Ra <sup>-</sup>	TP53 <sup>wt</sup> , PTEN <sup>wt</sup> , 4q12 (PDGFRA) amplified	IL-8 <sup>high</sup> , IL-6 <sup>high</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>	RRID:CVCL_4U43	300935
HROG13 <sup>6</sup>	Human Glioblastoma cell line	HLA-A02 <sup>+</sup> , MHC class I <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , MHC class II <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , $\beta$ -microglobulin <sup>+</sup> , HLA-E <sup>-</sup> , HLA-G <sup>-</sup> , MIC A <sup>-</sup> , MIC-B <sup>-</sup> , ICAM-1 <sup>+</sup> , GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup>	EGFR <sup>+</sup> , HER2/neu <sup>-</sup> , Survivin <sup>+</sup> , MAGE-1 <sup>-</sup> , MART-1 <sup>-</sup> , Tyrosinase <sup>-</sup> , RHAMM <sup>-</sup> , WT-1 <sup>-</sup> , IL-13Ra <sup>-</sup>	TP53 <sup>wt</sup> , PTEN <sup>wt</sup> , chr.7 amplified; chr. 10 lost; 9p21.3 (CDKN2A) deleted	IL-8 <sup>high</sup> , IL-6 <sup>-</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>	RRID:CVCL_4U44	300936
HROG15 <sup>6</sup>	Human Glioblastoma cell line	HLA-A02 <sup>+</sup> , MHC class I <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , MHC class II <sup>-</sup> IFN- $\gamma$ <sup>+</sup> IFN- $\gamma$ <sup>-</sup> , $\beta$ -microglobulin <sup>+</sup> HLA-E <sup>+</sup> , HLA-G <sup>-</sup> , MIC A <sup>+</sup> , MIC-B <sup>-</sup> , ICAM-1 <sup>+</sup> , GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup>		TP53 <sup>wR273C</sup> , PTEN <sup>S170N</sup> ; 17q11.2(NF) deleted	IL-8 <sup>high</sup> , IL-6 <sup>high</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>		300937
HROG17 <sup>6</sup>	Human Glioblastoma cell line	HLA-A02 <sup>+</sup> , MHC class I <sup>weak</sup> , IFN- $\gamma$ <sup>+</sup> , MHC class II <sup>-</sup> IFN- $\gamma$ <sup>+</sup> , $\beta$ -microglobulin <sup>+</sup> , HLA-E <sup>+</sup> , HLA-G <sup>+</sup> , MIC A <sup>+</sup> , MIC-B <sup>-</sup> , ICAM-1 <sup>+</sup> ; GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup>	EGFR <sup>+</sup> , HER2/neu <sup>-</sup> , Survivin <sup>+</sup> , MAGE-1 <sup>-</sup> , MART-1 <sup>-</sup> , Tyrosinase <sup>-</sup> , RHAMM <sup>-</sup> , WT-1 <sup>-</sup> , IL-13Ra <sup>-</sup>	IDH 1 & 2 <sup>wt</sup> , TP53 <sup>wt</sup> , K-Ras <sup>wt</sup> , B-RAF <sup>wt</sup> , PTEN <sup>R130+</sup>	IL-8 <sup>high</sup> , IL-6 <sup>high</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>	RRID:CVCL_4U45	300938
HROG36 <sup>6</sup>	Human Glioblastoma cell line	GFAP <sup>+</sup> ; nestin <sup>+</sup> , vimentin <sup>+</sup> , S-100 <sup>+</sup> , GBM <sup>+</sup> , BTSC <sup>+</sup>		IDH 1 & 2 <sup>wt</sup> , TP53 <sup>wt</sup> , K-Ras <sup>wt</sup> , B-RAF <sup>wt</sup> , MGMT <sup>-</sup> , CN=0, PTEN <sup>I5S</sup>	IL-8 <sup>high</sup> , IL-6 <sup>high</sup> , CEA <sup>-</sup> , TNF $\alpha$ <sup>-</sup> , TGF $\beta$ <sup>-</sup>	RRID:CVCL_4U49	300939
Hs683 <sup>7</sup>	Human Oligodendroglioma cell line	G6PD, B; PGM1, 1; PGM3, 1-2; ES-D, 1; Me-2, 2; AK-1, 1; GLO-1, 2				RRID:CVCL_0844	300213
IMR-32 <sup>8</sup>	Human Neuroblastoma cell line	G6PD, B				RRID:CVCL_0346	300148
Kelly <sup>9</sup>	Human Neuroblastoma cell line					RRID:CVCL_2092	300317
NCH421K <sup>10</sup>	Human Stem Cell Like Glioblastoma cell line	CD133+++ serum free cell culture				RRID:CVCL_X910	300118
NCH612 <sup>11</sup>	Human Anaplastic Oligodendroglioma cell line	serum free cell culture				RRID:CVCL_X913	300121

Name of cell line	Cell type	Cell Marker	Tumor antigens	Mutations	Secretion of Cytokines	Ref ID in Cellosaurus <sup>17</sup>	CLS order no.
NCH644 <sup>12</sup>	Human Stem Cell Like Glioblastoma cell line	CD133+++ serum free cell culture				RRID:CVCL_X914	300124
NCH690 <sup>13</sup>	Human Stem Cell Like Glioblastoma cell line	serum free cell culture				RRID:CVCL_X915	300120
SH-SY5Y <sup>14</sup>	Human Neuroblastoma cell line					RRID:CVCL_0019	300154
U-118 MG <sup>15</sup>	Human Glioblastoma cell line, <b>Derivative of U-138 MG</b>	A3,9,B8				RRID:CVCL_0633	300362
U-138 MG <sup>15</sup>	Human Glioblastoma cell line	Aw24, B27, Bw51				RRID:CVCL_0020	300363
U-343 MGa <sup>16</sup>	Human Glioblastoma cell line, Cross-contaminated?	A2,3,B7				RRID:CVCL_S471	300365
U-87 MG <sup>15</sup>	Human Glioblastoma cell line, Cross-contaminated, Origin unknown	GFAP-				RRID:CVCL_0022	300367
U-251 MG <sup>15</sup>	Human Glioblastoma cell line	A1,2,3,Aw24; GFAP++				RRID:CVCL_0021	300385

Information on cell culture conditions, authentication data and others can be found on the website: [www.clsgmbh.de](http://www.clsgmbh.de)

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17. <http://web.expasy.org/cellosaurus/> - the cellosaurus represents a detailed data collection bank of a plethora of cell line relevant data from various cell banks.

All of the products listed in Table 1/Table 2 are intended for research use only, not for use in human, therapeutic or diagnostic applications.

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