

Data Sheet

PAGE 1/4

BCRJ Code:	0404
Cell Line:	Kyse-30
Species:	Homo sapiens
Vulgar Name:	Human
Tissue:	Esophagus
Cell Type:	Polygonal
Morphology:	Epitheloid with long processes growing in monolayers
Disease:	Squamous Carcinoma
Growth Properties:	Adherent
Sex:	Male
Age/Ethnicity:	64 Year / Asian
Derivation:	KYSE-30 was established from the oesophageal cancer of an untreated 64 year old male. The tumour sample was taken from the mucosal surface of a well differentiated squamous cell carcinoma. The cell line KYSE-30 was established with the use of tumours initially transplanted to athymic mice. The cells are reported to have a doubling time of 20.8 hrs in the exponential growth phase. A p53 mutation at the splice acceptor site of intron 6 and a 12 fold amplification of c-erb B has been reported. KYSE-30 cells express a large number of epidermal growth factor receptors, 1.2x10,000,000 sites/cell.
Biosafety:	1
Culture Medium:	RPMI 1640 + Ham's F12 (1:1) + 2mM Glutamine + 2% Fetal Bovine Serum (FBS).
Subculturing:	Split sub-confluent cultures (70-80%) using 0.25% trypsin or trypsin/EDTA; 5% CO ₂ ; 37°C
Subculturing Medium Renewal:	Every 2-6 days
Subculturing Subcultivation Ratio:	1:10 i.e. seeding at 1x10,000 cells/cm ²
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO ₂), 5% Temperature: 37°C
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)

Thawing Frozen Cells:

SAFETY PRECAUTION: It is highly recommended that protective gloves and clothing always be used and a full face mask always be worn when handling frozen vials. It is important to note that some vials leak when submerged in liquid nitrogen and will slowly fill with liquid nitrogen. Upon thawing, the conversion of the liquid nitrogen back to its gas phase may result in the vessel exploding or blowing off its cap with dangerous force creating flying debris. 1. Thaw the vial by gentle agitation in a 37°C water bath. To reduce the possibility of contamination, keep the O-ring and cap out of the water. Thawing should be rapid (approximately 2 minutes). 2. Remove the vial from the water bath as soon as the contents are thawed, and decontaminate by dipping in or spraying with 70% ethanol. All of the operations from this point on should be carried out under strict aseptic conditions. 3. For cells that are sensitive to DMSO it is recommended that the cryoprotective agent be removed immediately. Transfer the vial contents to a centrifuge tube containing 9.0 mL complete culture medium and spin at approximately 125 x g for 5 to 7 minutes. 4. Discard the supernatant and Resuspend cell pellet with the recommended complete medium (see the specific batch information for the culture recommended dilution ratio). 5. Incubate the culture in an appropriate atmosphere and temperature (see "Culture Conditions" for this cell line). **NOTE:** It is important to avoid excessive alkalinity of the medium during recovery of the cells. It is suggested that, prior to the addition of the vial contents, the culture vessel containing the growth medium be placed into the incubator for at least 15 minutes to allow the medium to reach its normal pH (7.0 to 7.6).

Shimada Y, Imamura M, Wagata T, Yamaguchi N, Tobe T. 1992 Characterization of 21 newly established esophageal cancer cell lines. *Cancer*. 69(2):277-84. Erratum in: *Cancer* 1992 70(1):206 PMID: 1728357. *Int J Cancer* 1994;58:291; *Int J Cancer* 1996;65:372; *Arch Jpn Chir* 1993;63(3):153-165. PubMed=1728357; DOI=10.1002/1097-0142(19920115)69:2<277::AID-CNCR2820690202>3.0.CO;2-C

Shimada Y., Imamura M., Wagata T., Yamaguchi N., Tobe T. Characterization of 21 newly established esophageal cancer cell lines. *Cancer* 69:277-284(1992) PubMed=7913084; DOI=10.1002/ijc.2910580224 Kanda Y., Nishiyama Y., Shimada Y., Imamura M., Nomura H., Hiai H., Fukumoto M. Analysis of gene amplification and overexpression in human esophageal-carcinoma cell lines. *Int. J. Cancer* 58:291-297(1994) PubMed=8575860; DOI=10.1002/(SICI)1097-0215(19960126)65:3<372::AID-IJC16>3.0.CO;2-C Tanaka H., Shibagaki I., Shimada Y., Wagata T., Imamura M., Ishizaki K. Characterization of p53 gene mutations in esophageal squamous cell carcinoma cell lines: increased frequency and different spectrum of mutations from primary tumors. *Int. J. Cancer* 65:372-376(1996) PubMed=9033652; DOI=10.1002/(SICI)1097-0215(19970207)70:4<437::AID-IJC11>3.0.CO;2-C Tanaka H., Shimada Y., Imamura M., Shibagaki I., Ishizaki K. Multiple types of aberrations in the p16 (INK4a) and the p15(INK4b) genes in 30 esophageal squamous cell-carcinoma cell lines. *Int. J. Cancer* 70:437-442(1997) PubMed=11092977; DOI=10.1111/j.1349-7006.2000.tb00895.x Pimkhaokham A., Shimada Y., Fukuda Y., Kurihara N., Imoto I., Yang Z.-Q., Imamura M., Nakamura Y., Amagasa T., Inazawa J. Nonrandom chromosomal imbalances in esophageal squamous cell carcinoma cell lines: possible involvement of the ATF3 and CENPF genes in the 1q32 amplicon. *Jpn. J. Cancer Res.* 91:1126-1133(2000) PubMed=11520067; DOI=10.1006/bbr.2001.5400 Kan T., Shimada Y., Sato F., Maeda M., Kawabe A., Kaganoi J.-I., Itami A., Yamasaki S., Imamura M. Gene expression profiling in human esophageal cancers using cDNA microarray. *Biochem. Biophys. Res. Commun.* 286:792-801(2001) PubMed=12963126; DOI=10.1016/S0304-3835(03)00344-6 Hoque M.O., Begum S., Sommer M., Lee T., Trink B., Ratovitski E., Sidransky D. PUMA in head and neck cancer. *Cancer Lett.* 199:75-81(2003) PubMed=15172977; DOI=10.1158/0008-5472.CAN-04-0172 Sonoda I., Imoto I., Inoue J., Shibata T., Shimada Y., Chin K., Imamura M., Amagasa T., Gray J.W., Hirohashi S., Inazawa J. Frequent silencing of low density lipoprotein receptor-related protein 1B (LRP1B) expression by genetic and epigenetic mechanisms in esophageal squamous cell carcinoma. *Cancer Res.* 64:3741-3747(2004) PubMed=16045545; DOI=10.1111/j.0959-9673.2005.00431.x Ban S., Michikawa Y., Ishikawa K.-I., Sagara M., Watanabe K., Shimada Y., Inazawa J., Imai T. Radiation sensitivities of 31 human oesophageal squamous cell carcinoma cell lines. *Int. J. Exp. Pathol.* 86:231-240(2005) PubMed=16364037; DOI=10.1111/j.1442-2050.2006.00530.x Su M., Chin S.-F., Li X.-Y., Edwards P., Caldas C., Fitzgerald R.C. Comparative genomic hybridization of esophageal adenocarcinoma and squamous cell carcinoma cell lines. *Dis. Esophagus* 19:10-14(2006) PubMed=20215515; DOI=10.1158/0008-5472.CAN-09-3458 Rothenberg S.M., Mohapatra G., Rivera M.N., Winokur D., Greninger P., Nitta M., Sadow P.M., Sooriyakumar G., Brannigan B.W., Ulman M.J., Perera R.M., Wang R., Tam A., Ma X.-J., Erlander M., Sgroi D.C., Rocco J.W., Lingen M.W., Cohen E.E.W., Louis D.N., Settleman J., Haber D.A. A genome-wide screen for microdeletions reveals disruption of polarity complex genes in diverse human cancers. *Cancer Res.* 70:2158-2164(2010) PubMed=21191746; DOI=10.1007/s11684-010-0260-x Ji J.-F., Wu K., Wu M., Zhan Q.-M. p53 functional activation is independent of its genotype in five esophageal squamous cell carcinoma cell lines. *Front. Med. China* 4:412-418(2010) PubMed=22460905; DOI=10.1038/nature11003 Barretina J.G., Caponigro G., Stransky N., Venkatesan K., Margolin A.A., Kim S., Wilson C.J., Lehar J., Kryukov G.V., Sonkin D., Reddy A., Liu M., Murray L., Berger M.F., Monahan J.E., Morais P., Meltzer J., Korejwa A., Jane-Valbuena J., Mapa F.A., Thibault J., Bric-Furlong E., Raman P., Shipway A., Engels I.H., Cheng J., Yu G.K., Yu J., Aspesi P. Jr., de Silva M., Jagtap K., Jones M.D., Wang L., Hatton C., Palessandolo E., Gupta S., Mahan S., Sougnez C., Onofrio R.C., Liefeld T., MacConaill L.E., Winckler W., Reich M., Li N., Mesirov J.P., Gabriel S.B., Getz G., Ardlie K., Chan V., Myer V.E., Weber B.L., Porter J., Warmuth M., Finan P., Harris J.L., Meyerson M., Golub T.R., Morrissey M.P., Sellers W.R., Schlegel R., Garraway L.A. The Cancer Cell Line Encyclopedia enables predictive modelling of anticancer drug sensitivity. *Nature* 483:603-607(2012) PubMed=25984343; DOI=10.1038/sdata.2014.35 Cowley G.S., Weir B.A., Vazquez F., Tamayo P., Scott J.A., Rusin S., East-Seletsky A., Ali L.D., Gerath W.F.J., Pantel S.E., Lizotte P.H., Jiang G., Hsiao J., Tsherniak A., Dwinell E., Aoyama S., Okamoto M., Harrington W., Gelfand E., Green T.M., Tomko M.J., Gopal S., Wong T.C., Li H., Howell S., Stransky N., Liefeld T., Jang D., Bistline J., Hill Meyers B., Armstrong S.A., Anderson K.C., Stegmaier K., Reich M., Pellman D., Boehm J.S., Mesirov J.P., Golub T.R., Root D.E., Hahn W.C. Parallel genome-scale loss of function screens in 216 cancer cell lines for the identification of context-specific genetic dependencies. *Sci. Data* 1:140035-140035(2014) PubMed=25485619; DOI=10.1038/nbt.3080 Klijn C., Durinck S., Stawiski E.W., Haverty P.M., Jiang Z., Liu H., Degenhardt J., Mayba O., Gnad F., Liu J., Pau G., Reeder J., Cao Y., Mukhyala K., Selvaraj S.K., Yu M., Zynda G.J., Brauer M.J., Wu T.D., Gentleman R.C., Manning G., Yauch R.L., Bourgon R., Stokoe D., Modrusan Z., Neve R.M., de Sauvage F.J., Settleman J., Seshagiri S., Zhang Z. A comprehensive transcriptional portrait of human cancer cell lines. *Nat. Biotechnol.* 33:306-312(2015) PubMed=30894373; DOI=10.1158/0008-5472.CAN-18-2747 Dutil J., Chen Z., Monteiro A.N., Teer J.K., Eschrich S.A. An interactive resource to probe genetic diversity and estimated ancestry in cancer cell lines. *Cancer Res.* 79:1263-1273(2019) PubMed=31068700; DOI=10.1038/s41586-019-1186-3 Ghandi M., Huang F.W., Jane-Valbuena J., Kryukov G.V., Lo C.C., McDonald E.R. III, Barretina J., Gelfand E.T., Bielski C.M., Li H., Hu K., Andreev-Drakhlin A.Y., Kim J., Hess J.M., Haas B.J., Aguet F., Weir B.A., Rothberg M.V., Paolella B.R., Lawrence M.S., Akbani R., Lu Y., Tiv H.L., Gokhale P.C., de Weck A., Mansour A.A., Oh C., Shih J., Hadi K., Rosen Y., Bistline J., Venkatesan K., Reddy A., Sonkin D., Liu M., Lehar J., Korn J.M., Porter D.A., Jones M.D., Golji J., Caponigro G., Taylor J.E., Dunning C.M., Creech A.L., Warren A.C., McFarland J.M., Zamanighomi M., Kauffmann A., Stransky N., Imielinski M., Maruvka Y.E., Cherniack A.D., Tsherniak A., Vazquez F., Jaffe J.D., Lane A.A., Weinstock D.M., Johannessen C.M., Morrissey M.P., Stegmaier F., Schlegel R., Hahn W.C., Getz G., Mills G.B., Boehm J.S., Golub T.R., Garraway L.A., Sellers W.R. Next-generation characterization of the Cancer Cell Line Encyclopedia. *Nature* 569:503-508(2019) PubMed=31978347; DOI=10.1016/j.cell.2019.12.023 Nusinow D.P., Szpyt J., Ghandi M., Rose C.M., McDonald E.R. III, Kalocsay M., Jane-Valbuena J., Gelfand E., Schweppe D.K., Jedrychowski M., Golji J., Porter D.A., Rejtar T., Wang Y.K., Kryukov G.V., Stegmaier F., Erickson B.K., Garraway L.A., Sellers W.R., Gygi S.P. Quantitative proteomics of the Cancer Cell Line Encyclopedia. *Cell* 180:387-402.e16(2020)

References:

Depositors:

Olavo Bohrer Amaral-Universidade Federal do Rio de Janeiro

Cellosaurus:

[VCVL_1351](https://www.ebi.ac.uk/cellosaurus/VCVL_1351)

