



Leibniz Institute
DSMZ-German Collection
of Microorganisms
and Cell Cultures GmbH



293

ACC 305

Cell line:
293

DSMZ no.:
ACC 305

Species:
human (*Homo sapiens*)

Cell type:
embryonal kidney

Origin:
established from a human primary embryonal kidney transformed by adenovirus type 5 (Ad 5); classified as risk category 1 according to the German Central Commission for Biological Safety (ZKBS) but not as GMO; cell line also known as HEK-293 (human embryonic kidney-293)

Reference(s):
[14573](#)

Biosafety level:
1

Risk

assessment:

The cell line was established by transfection of the cells with sheared DNA of adenovirus type 5. The cells contain 4 to 5 copies of the left end of the virus (12% of the viral genome) including E1a and E1b genes and one copy of the right end of the virus (10% of the genome) including the E4 gene. No active viruses are produced. No GMO.

Permissions
and
restrictions:

[A](#)

DSMZ Cell Culture Data:**Morphology:**

adherent fibroblastoid cells growing as monolayer; [image](#);
[image](#)

Medium:

90-95% Dulbecco's MEM (with 25mM HEPES) + 5-10% h.i.
FBS

Subculture:

seed out at about $2-3 \times 10^6$ cells/25 cm²; split confluent culture 1:5 to 1:6 every 2-3 days (without using trypsin/EDTA, cells can be detached by tapping the flask)

Incubation:

at 37 °C with 10% CO₂

Doubling time:

about 24-30 hours

Harvest:

cell harvest of about 20×10^6 cells/80 cm²

Storage:

frozen with 70% medium, 20% FBS, 10% DMSO

DSMZ Scientific Data:

Mycoplasma:

negative in DAPI, microbiological culture, RNA hybridization, PCR assays

Immunology:

To inquire about expression of EpCAM and intermediate filaments, contact hilmar.quentmeier@dsmz.de.

Fingerprint:

multiplex PCR of minisatellite markers revealed a unique DNA profile

Species:

confirmed originally as human with IEF of AST, LDH and later by STR fingerprinting

Cytogenetics:

human near-triploid karyotype with 6% polyploidy - 69(64-69)XX?X, +1, +6, -10, -13, -16, -18, -20, +21, +22, +mar, add(?X)(p22), inv(1)(p35q43), del(1)(p35), i(5p), del(6)(q11), add(8)(q24), add(13)(p13), add(17)(qter), der(?)t(5;?)(q13;?)

Viruses:

ELISA: reverse transcriptase negative; PCR: EBV -, HBV -, HCV -, HHV-8 -, HIV-1 -, HIV-2 -, HTLV-I/II -, MLV -, SMRV -

Supplied as:

Delivery form	Prices
Frozen culture	400,- €
Growing culture (please inquire for exact delivery time)	800,- €
DNA isolated from cell line (25 µg)	500,- €
DNA isolated from cell line (5 µg)	120,- €

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