Code:	0307
Cell Line:	UMNSAH/DF-1
Species:	Gallus gallus **Vulgar Name:** Chicken
Tissue:	Embryo
Morphology:	Fibroblast
Growth Properties:	Adherent
Age Ethinicy:	10 days gestation
Derivation:	UMNSAH/DF-1 is a spontaneously immortalized chicken cell line derived from 10 day old East Lansing Line (ELL-0) eggs. Primary chicken embryonic fibroblasts were dissociated and grown in culture; the fibroblasts were passaged until they began to senesce; the cells were concentrated during cell senescence to maintain about 30% to about 60% culture confluence.
Applications:	The cells are useful as substrates for virus propagation, recombinant protein expression and recombinant virus production
Virus Succeptibility:	Meleagrid herpesvirus 1 Fowlpox virus Avian reovirus Rous sarcoma virus
Tumor Formation:	NO
Biosafey:	1
Additional info:	foci of non-senescent cells were identified and grown for greater than 30 passages. No clonal proliferation was observed in soft agar cultures, indicating that these cells were immortalized but not transformed.
Culture Medium:	Dulbecco's Modified Eagle's Medium (DMEM) modified to contain 4 mM L-glutamine, 4500 mg/L glucose, 1 mM sodium pyruvate, and 1500 mg/L sodium bicarbonate and fetal bovine serum to a final concentration of 10%.
Subculturing:	Volumes are given for a 75 cm2 flask. Increase or decrease the amount of dissociation medium needed proportionally for culture

	vessels of other sizes. Remove and discard culture medium. Briefly rinse the cell layer with PBS without calcium and magnesium to remove all traces of serum that contains trypsin inhibitor. Add 2.0 to 3.0 mL of Trypsin-EDTA solution to flask and observe cells under an inverted microscope until cell layer is dispersed (usually within 5 to 15 minutes). Note: To avoid clumping do not agitate the cells by hitting or shaking the flask while waiting for the cells to detach. Cells that are difficult to detach may be placed at 39°C to facilitate dispersal. Add 6.0 to 8.0 mL of complete growth medium and aspirate cells by gently pipetting. Add appropriate aliquots of the cell suspension to new culture vessels. Incubate cultures at 39°C. NOTE: For more information on enzymatic dissociation and subculturing of cell lines consult Chapter 12 in Culture of Animal Cells, a manual of Basic Technique by R. Ian Freshney, 6th edition, published by Alan R. Liss, N.Y., 2010. **Medium Renewal:** Twice per week **Subcultivation ratio:** 1:2 to 1:10 is recommended
Culture Conditions:	Atmosphere: air, 95%; carbon dioxide (CO_2), 5% Temperature: 39°C; (Max. 40°C, Min. 38°C)
Cryopreservation:	95% FBS + 5% DMSO (Dimethyl sulfoxide)
Thawing Frozen Cells:	SAFETY PRECAUTION: Is highly recommend 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 submersed 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 Oring 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 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 a 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).
References:	Foster DN, Foster LK. Immortalized cell lines for virus growth. US Patent 5,672,485 dated Sep 30 1997
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