Product sheet

MSTO-211H growing culture | 330450

General information

Description	The MSTO-211H cell line was established in 1985 from the pleural effusion of a patient with biphasic mesothelioma of the lung. The patient had not received prior radiation or chemotherapy.
Organism	Human
Tissue	Lung
Disease	Pleural mesothelioma
Synonyms	MSTO-211 H, MSTO211H, MSTO-211, 211H, MeSoTheliOma-211H

Characteristics

Age	62 years
Gender	Male
Ethnicity	Caucasian
Growth properties	Adherent

Identifiers / Biosafety / Citation

Citation	MSTO-211H (Cytion catalog number 300450)
Biosafety level	1

Expression / Mutation

Protein expression	High affinity binding sites for EGF, expression of Neuron specific enolase (NSE) and alpha and beta subunits of HCG, L-DOPA decarboxylase (DDC), bombesin and neurotensin were not detected.
Tumorigenic	Yes, tumors for med in approximately 20% of nude mice inoculated with MSTO-211H cells
Karyotype	modal number = 72, range = 70 to 78

Handling

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Culture Medium	RPMI 1640, w: 2.1 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Medium supplements	Supplement the medium with 10% FBS
Passaging solution	Accutase
Doubling time	20 hours
Subculturing	The cells can reach a saturation density of 400.000 cells per cm2, but will slough off the surface as they attain this density. Remove medium and rinse the adherent cells using PBS without calcium and magnesium (3-5 ml PBS for T25, 5-10ml for T75 cell culture flasks). Add Accutase (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at ambient temperature for 8-10 minutes. Carefully resuspend the cells with medium (10 ml), centrifuge for 5 min at 300xg, resuspend cells in fresh medium and dispense into new flasks which contain fresh medium.
Split ratio	A ratio of 1:3 to 1:6 is recommended
Seeding density	1 x 10^4 cells/cm^2
Fluid renewal	2 to 3 times per week
Freezing recovery	After thawing, plate the cells at 5 x 10^4 cells/cm^2 and allow the cells to recover from the freezing process and to adhere for at least 24 hours.
Freeze medium	CM-1 (Cytion catalog number 800100) or CM-ACF (Cytion catalog number 806100)
Handling of cryopreserved cultures	MSTO-211H cells are shipped in a deep-frozen state on dry ice. Upon receipt, confirm that the vial remains frozen. For storage, place the cryovial immediately at temperatures below -150 degrees. If you plan to culture the cells immediately, swiftly thaw the vial by shaking it in a 37 degrees water bath with clean water and an antimicrobial agent for 40-60 seconds. Remove the vial once a small ice clump persists, ensuring it remains cold. Proceed with all subsequent steps under aseptic conditions. In a sterile flow hood, disinfect the cryovial with 70% ethanol. Then, gently open the vial and transfer the cell suspension into a 15 ml centrifuge tube pre-filled with 8 ml of room temperature culture medium. Gently mix the cells. For cell separation, centrifuge at 300 x g for 3 minutes and dispose of the supernatant. Skipping centrifugation is optional, although any residual freezing medium should be removed after 24 hours. Resuspend the pellet gently in 10 ml of fresh culture medium and divide between two T25 culture flasks. Follow the subculture protocol for subsequent steps.

Handling of proliferating cultures	One or two cell culture flasks come filled with cell culture medium. Collect the entire medium in a 50 ml centrifuge tube. Spin down the collected medium at 300 x g for 3 minutes to collect the cells which may have detached during transit. If a cell pellet is visible, resuspend the cells in 5 ml of cell culture medium and transfer to a T25 cell culture flask. Carefully add 5 ml of cell culture medium to each T25 cell culture flask. Examine cell morphology and confluency using a microscope. Finally, incubate the flasks at 37 degrees Celsius for at least 24 hours.

Quality control / Genetic profile / HLA

Sterility	Mycoplasma contamination is rigorously 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.
STR profile	**Amelogenin**: x,Y **CSF1PO**: 11,12 **D13S317**: 11,14 **D16S539**: 13 **D5S818**: 12 **D7S820**: 8,12 **TH01**: 8,9.3 **TPOX**: 11 **vWA**: 16,18 **D3S1358**: 15 **D21S11**: 28,31 **D18S51**: 16,18 **Penta E**: 7,13 **Penta D**: 11,12 **D8S1179**: 13 **FGA**: 21
HLA alleles	**A***: 01:01:01, 03:01:01 **B***: 07:02:01, 39:01:01 **C***: 07:02:01, 12:03:01 **DRB1***: 01:01:01, 04:01:01 **DQA1***: 01:01:01, 03:01:01 **DQB1***: 03:02:01, 05:01:01 **DPB1***: 04:01:01 **E**: 01:01, 01:03