Product sheet

KLN-205 Cells | 400419

General information

Description	KLN-205 is a murine lung carcinoma cell line derived from an adult mouse. This cell line is widely used in cancer research, particularly for studying the mechanisms of lung cancer progression, metastasis, and potential therapeutic interventions. KLN-205 cells exhibit characteristics typical of non-small cell lung carcinoma (NSCLC), making them a valuable model for investigating the molecular and cellular underpinnings of this disease. Researchers utilize KLN-205 to evaluate the efficacy of various chemotherapeutic agents, immunotherapies, and targeted treatments, helping to advance the understanding of lung cancer biology and treatment strategies. KLN-205 cells are known for their robust growth and ability to form tumors when implanted in immunocompromised mice, providing a reliable in vivo model for preclinical studies. These cells are used to explore tumor-host interactions, immune responses to lung cancer, and the impact of genetic and epigenetic modifications on cancer development and progression. The KLN-205 cell line serves as a critical tool in oncology research, aiding in the identification of novel biomarkers and therapeutic targets for lung cancer.
Organism	Mouse
Tissue	Lung
Disease	Squamous cell carcinoma
Synonyms	KLN 205, KLN205

Characteristics

Breed/Subspecies	DBA/2
Growth properties	Adherent

Regulatory Data

Citation	KLN-205 (Cytion catalog number 400419)
Biosafety level	1
NCBI_TaxID	10090
CellosaurusAccession	CVCL_3533

Biomolecular Data

Tumorigenic	Yes, in DBA/2 and BDF1 mice

Handling

Culture Medium	EMEM (MEM Eagle), w: 2 mM L-Glutamine, w: 2.2 g/L NaHCO3, w: EBSS (Cytion article number 820100a)
Supplements	Supplement the medium with 10% FBS and 1% NEAA
Dissociation Reagent	Accutase
Subculturing	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 TrypLE Express (1-2ml per T25, 2.5ml per T75 cell culture flask), the cell sheet must be covered completely. Incubate at 37 degree Celsius for 10 -15 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.
Fluid renewal	2 to 3 times per week
Post-Thaw 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	As a cryopreservation medium, we use complete growth medium (including FBS) + 10% DMSO for adequate post-thaw viability, or CM-1 (Cytion catalog number 800100), which includes optimized osmoprotectants and metabolic stabilizers to enhance recovery and reduce cryo-induced stress.

Thawing and Culturing Cells	1. Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit. 2. Upon receipt, either store the cryovial immediately at temperatures below -150°C to ensure the preservation of cellular integrity, or proceed to step 3 if immediate culturing is required. 3. For immediate culturing, swiftly thaw the vial by immersing it in a 37°C water bath with clean water and an antimicrobial agent, agitating gently for 40-60 seconds until a small ice clump remains. 4. Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening. 5. Carefully open the disinfected vial and transfer the cell suspension into a 15 ml centrifuge tube containing 8 ml of room-temperature culture medium, mixing gently. 6. Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium. 7. Gently resuspend the cell pellet in 10 ml of fresh culture medium. For adherent cells, divide the suspension between two T25 culture flasks; for suspension cultures, transfer all the medium into one T25 flask to promote effective cell interaction and growth. 8. Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.
Incubation Atmosphere	37°C, 5% CO_2, humidified atmosphere.
Shipping Conditions	Cryopreserved cell lines are shipped on dry ice in validated, insulated packaging with sufficient refrigerant to maintain approximately −78 °C throughout transit. On receipt, inspect the container immediately and transfer vials without delay to appropriate storage.
Storage Conditions	For long-term preservation, place vials in vapor-phase liquid nitrogen at about −150 to −196 °C. Storage at −80 °C is acceptable only as a short interim step before transfer to liquid nitrogen.

Quality Control & Molecular Analysis

Sterility

Mycoplasma contamination is 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.