Product sheet

MUM2B Cells | 305477

General information

Description	The MUM2B cell line is a metastatic uveal melanoma model derived from a hepatic metastasis of a uveal melanoma tumor. This cell line is extensively utilized in ocular oncology research to study the aggressive and invasive characteristics of metastatic uveal melanoma. Unlike primary uveal melanoma cell lines, MUM2B exhibits heightened metastatic behavior, making it a critical tool for understanding the progression and treatment resistance of advanced melanoma. MUM2B cells have been shown to retain key melanoma markers such as S-100, HMB-45, and Melan-A, confirming their melanocytic origin. Additionally, this cell line is characterized by its ability to mimic vasculogenic patterns in vitro, a phenomenon associated with tumor aggressiveness and metastatic potential. MUM2B has been used to investigate the molecular mechanisms driving melanoma progression, including the role of apoptosis resistance pathways and mitochondrial dysfunction. The cell line responds to specific apoptotic inducers such as NOXA in a p53-independent manner, highlighting its utility in exploring therapeutic strategies targeting apoptosis-resistant tumors. Research using MUM2B has contributed significantly to identifying potential therapeutic targets for metastatic melanoma. Studies demonstrate its sensitivity to innovative compounds such as γ-secretase inhibitors (GSI), which induce apoptosis selectively in melanoma cells while sparing normal melanocytes. These findings underscore MUM2B's role as a vital model for testing novel therapeutic agents and improving the understanding of metastatic uveal melanoma biology.
Organism	Human
Tissue	Eye, uvea
Disease	Melanoma
Synonyms	MUM-2B, MuM-2B, Mum2B

Characteristics

Age	Unspecified
Gender	Female
Ethnicity	Unspecified
Growth properties	Adherent

Regulatory Data

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Citation	MUM2B (Cytion catalog number 305477)
Biosafety level	1
NCBI_TaxID	9606
CellosaurusAccession	CVCL_3447

Biomolecular Data

Handling

Culture Medium	RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)
Supplements	Supplement the medium with 10% FBS
Dissociation Reagent	Accutase
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.