Product sheet

AE-2 Cells | 300638

General information

Description	AE-2 cells are a specialized type of hybridoma animal cells derived from Mus musculus, specifically from B lymphocytes of mice. These lymphoblast cells are essential for various immunology applications and offer exceptional growth properties in suspension culture. AE-2 cells result from the fusion between spleen cells from mice immunized with purified human erythrocyte acetylcholinesterase and Sp2/0-Ag14 myeloma cells. The critical feature of AE-2 cells lies in their ability to express genes that encode immunoglobulin, monoclonal antibodies specifically targeting human acetylcholinesterase. These antibodies belong to the IgG1 isotype, which is highly valuable for immunological studies. AE-2 cells exhibit a lymphoblast morphology characterized by their lymphocyte-like appearance with enhanced growth potential. Their suspension growth properties make them well-suited for large-scale cultures and downstream applications. Immunology researchers will find AE-2 cells particularly useful in various applications. These include antibody production, antigen detection, protein analysis, and other immunological assays. The monoclonal antibodies expressed by AE-2 cells specifically target acetylcholinesterase in human samples, enabling researchers to study its interactions, functions, and potential therapeutic implications.
Organism	Mouse
Tissue	Hybridoma
Applications	Immunology, production of therapeutic antibodies
Synonyms	AE2

Characteristics

Morphology	Lymphoblast
Cell type	Hybridoma (Spleen, B cell)
Growth properties	Suspension

Identifiers / Biosafety / Citation

Citation	AE-2 (Cytion catalog number 300638)
Biosafety level	1

AE-2 Cells | 300638

Expression / Mutation

Protein expression	Monoclonal antibody isotype: IgG1 against human ACHE (UniProtKB P22303)
Viruses	Negative for mousepox

Handling

Culture Medium	DMEM, w: 4.5 g/L Glucose, w: 4 mM L-Glutamine, w: 1.5 g/L NaHCO3, w: 1.0 mM Sodium pyruvate (Cytion article number 820300a)
Medium supplements	Supplement the medium with 10% FBS
Subculturing	Gently homogenize the cell suspension in the flask by pipetting up and down, then take a representative sample to determine the cell density per ml. Dilute the suspension to achieve a cell concentration of 1 x 10^5 cells/ml with fresh culture medium, and aliquot the adjusted suspension into new flasks for further cultivation.
Freeze medium	CM-1 (Cytion catalog number 800100)

Handling of cryopreserved cultures

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.

Quality control / Genetic profile / HLA

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.