35.1

305002

GENERAL INFORMATION

Description

35.1 are hybridoma cells derived from a Mus musculus B cell and myeloma. Of particular interest is their reactivity to the human T cell surface protein Tp50 (CD2), making them valuable tools for targeted research. The antibody produced by 35.1 cells inhibits T-cell proliferative responses and cytotoxicity without interfering with antibody-mediated cellular cytotoxicity. Derived from the fusion of spleen cells with NSI/1 myeloma cells, 35.1 cells express genes for immunoglobulin production, specifically monoclonal antibodies against human CD2. The isotype of the antibody is IgG2a.

Tissue	Spleen (B cell origin) / Bone marrow (NSI/1 myeloma fusion partner)
Disease	Hybridoma (B cell × myeloma fusion); produces monoclonal antibody against human CD2 (Tp50)
Metastatic site	Not applicable (hybridoma cell line; not a primary tumor sample)

Applications

Monoclonal antibody production (anti-human CD2, IgG2a); T cell biology research; CD2-mediated T cell activation and proliferation studies; immunological assays requiring CD2 blockade; cytotoxicity research; hybridoma technology

Synonyms

- HB-222

CLASSIFICATION

Organism	Mouse
Sex	Unspecified
Growth properties	Suspension
GMO status	GMO-S1

GMO status details

GMO-S1: This hybridoma contains rearranged immunoglobulin genes from a B cell-myeloma fusion. IgG2a heavy and light chain genes are expressed from the B cell fusion partner. This classification applies only within Germany and may differ elsewhere.

Biosafety level	2

CHARACTERISTICS

Morphology	Lymphoblast
Cell type	B lymphoblast / hybridoma cells
Doubling time	approx. 24 to 36 hours

IDENTIFIERS

Citation

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NCBI TaxID	10090
Cellosaurus	CVCL_7239

EXPRESSION AND SUSCEPTIBILITY

Protein expression

Immunoglobulin, monoclonal antibody, against human CD2

HANDLING AND CULTURE

Culture medium

RPMI 1640, w: 2.0 mM stable Glutamine, w: 2.0 g/L NaHCO3 (Cytion article number 820700a)

Incubation atmosphere	37°C, 5% CO_2, humidified atmosphere.

Supplements

Supplement the medium with 10% FBS, 0,05 mM 2-mercaptoethanol

Dissociation reagent	None

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.

Split ratio	1 to 5
Seeding density	1 to 5 × 10^5 cells/ml
Fluid renewal	2 to 3 times per week
Post-thaw recovery	After thawing, centrifuge the cells at 300×g for 5 minutes, remove the cryoprotectant-containing supernatant, and resuspend in fresh pre-warmed complete medium at 1 × 10^5 cells/ml. Allow at least 24–48 hours for recovery and expansion before the first passaging step.

Thawing and culturing

Confirm that the vial remains deeply frozen upon delivery, as cells are shipped on dry ice to maintain optimal temperatures during transit.
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.
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.
Perform all subsequent steps under sterile conditions in a flow hood, disinfecting the cryovial with 70% ethanol before opening.
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.
Centrifuge the mixture at 300 x g for 3 minutes to separate the cells and carefully discard the supernatant containing residual freezing medium.
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.
Adhere to established subculture protocols for continued growth and maintenance of the cell line, ensuring reliable experimental outcomes.

QUALITY CONTROL AND CRYOPRESERVATION

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.

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.

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.

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.

DONOR

Breed / subspecies	BALB/c (NSI/1 myeloma background)
Donor age	Age unspecified
Ethnicity	Not applicable (mouse cell line)

LEGAL AND SAFETY

Safety precautions

When planning to store a cryovial in liquid nitrogen for future thawing, it is mandatory to adhere to stringent safety measures. Appropriate protective gloves and clothing are essential, and the use of a face mask or safety goggles is required during the transfer of frozen samples to or from the liquid nitrogen tank. This is to mitigate the risk of injury from potential cryovial explosions upon removal, which can result in the projection of sharp fragments.

Warranty

At Cytion, we stand behind the quality and viability of our products.
We guarantee that our cells will be viable at the start of culture for
60 days after shipment from our facilities.
We assure that all materials conform to the specifications described in the
Certificate of Analysis and/or Product Sheet.
For full details, please refer to our
Warranty Statement.

Material Transfer Agreement required	Yes