CHO-CXCR4 Middels til høy

305411MH

GENERELL INFORMASJON

Beskrivelse

Disclaimer: The prices displayed for cell lines are exclusively for academic/not-for-profit customers. For commercial entitites the price is approximately €6,250.
If you represent a commercial entity or are unsure which category applies, please
contact us.
The CHO-CXCR4-Medium-high cell line is a stable recombinant CHO (Chinese Hamster Ovary) cell line expressing the CXCR4 receptor at a medium-high level, approximately 9500 molecules per cell. This cell line was developed using an innovative landing pad technology, which ensures targeted integration of the CXCR4 gene at a pre-validated genomic locus. This approach results in consistent and reliable expression of the CXCR4 receptor, facilitating reproducible experimental outcomes.
CXCR4, also known as CD184, is a chemokine receptor involved in critical biological processes such as immune cell trafficking, hematopoiesis, and as a co-receptor for HIV entry into cells. The receptor's interaction with its ligand, CXCL12, is essential for the migration and homing of hematopoietic stem cells and leukocytes. In oncology, CXCR4 plays a significant role in tumor growth, metastasis, and angiogenesis, with its expression often upregulated in various cancers, including hematological malignancies. This upregulation is frequently associated with therapy resistance and poor prognosis. The expression of CXCR7 in this cell line was confirmed using flow cytometry.

Vev	Ovary
Sykdom	Chinese hamster ovary, non-neoplastic; genetically engineered for CXCR4 surface expression (medium-high expression level)

Søknader

Antibody screening; CXCR4-targeted therapy development; HIV entry research; hematopoietic stem cell biology; flow cytometry

Synonymer

- CHO-CXCR4

KLASSIFISERING

Organisme	Kinesisk hamster
Sex	Kvinne
Vekstegenskaper	Adhesjon og suspensjon
GMO-status	GMO-S1

Detaljer om GMO-status

GMO-S1: This CHO derivative contains a construct driving medium-to-high expression of human CXCR4 for GPCR signaling and ligand-binding analyses. This classification applies only within Germany and may differ elsewhere.

Biosikkerhetsnivå	1

EGENSKAPER

Morfologi	Epithelial-like
Celletype	Epithelial cells
Fordoblingstid	approx. 14-16 hours

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IDENTIFIKATORER

Kildehenvisning

CHO-CXCR4 Medium-high (Cytion catalog number 305411MH)

NCBI-skattenummer	10029
Cellosaurus	CVCL_A8W0

UTTRYKK OG MOTTAKELIGHET

Reseptorer som uttrykkes

CXCR4 (CD184)

HÅNDTERING OG KULTUR

Næringsmedium

For adherent cultures: DMEM:Ham's F12 (1:1), w: 3.1 g/L Glucose, w: 2.5 mM L-Glutamine, w: 15 mM HEPES, w: 0.5 mM Sodium pyruvate, w: 1.2 g/L NaHCO3 (Cytion article number 820400a)
For suspension cultures: CHO Growth Medium A (from InSCREENeX; InSCREENeX catalog number INS-ME-1039)

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

Kosttilskudd

For adherent cultures: Supplement the medium with 5% FBS. Add Geneticin (G418-Sulfat) to achieve a final concentration of 0.5 mg/mL.

Dissosiasjonsmiddel	For adherent cultures: Trypsin-EDTA

Subkultivering

For routine adherent cell culture: Aspirate the old culture medium from the adherent cells, and wash them with PBS to remove any remaining medium. After aspirating the PBS, add the appropriate volume of Trypsin/EDTA solution based on the culture vessel size (e.g., 1 ml for a T25 flask, 3 ml for a T75 flask) and incubate at room temperature or 37°C for 5-10 minutes, or until the cells detach. Monitor detachment under a microscope, and gently tap the vessel if necessary to release the cells. Once detached, add complete medium to inactivate the Trypsin/EDTA, gently resuspend the cells, and transfer an aliquot of the cell suspension into a new culture vessel containing fresh medium. Place the vessel in an incubator set to 37°C with 5% CO_2, and change the medium every 2-3 days.

Oppdelingsforhold	1 to 5
Såtetthet	2 to 5 x 10^4 cells/cm^2
Væskefornyelse	2 to 3 times per week
Gjenoppretting etter tining	After thawing, split the cells at a ratio of 1:2 to 1:3 in T25 flasks and allow the cells to recover from the freezing process and to adhere (for adherent cultures) for at least 24 hours.

Tining og dyrking

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.

KVALITETSKONTROLL OG KRYOKONSERVERING

Sterilitet

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.

Frysemedium	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.

Oppbevaringsbetingelser

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.

Fraktvilkår

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

Donorens alder	Adult

JURIDISK OG SIKKERHET

Sikkerhetsregler

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.

Ansvarsfraskrivelse

Our cells are provided for in vitro laboratory research purposes exclusively and are not intended for clinical or diagnostic use, nor are they to be administered to humans or used for veterinary purposes. Users must adhere to all applicable guidelines and regulations for the handling and use of these cells in a research setting.

Garanti

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.

Avtaler med tredjeparter gjelder	Yes