MOVAS

305362

GENERAL INFORMATION

Description

MOVAS□胞系是一种源自C57BL/6小鼠主动脉平滑肌□胞的小鼠血管平滑肌□胞（VSMC）系。该永生化□胞系保留了平滑肌的关键特征，因此成为研究血管平滑肌 □胞生物学和病理生理学的宝贵工具。 MOVAS□胞已被广泛应用于动脉粥样硬化、钙化及 □胞信号转导等血管过程的研究。它们表达典型的平滑肌标志物，包括 α-平滑肌肌动蛋白（α-SMA），并可在各种实验条件下进行培养，以模拟血管疾病。

MOVAS□胞的主要应用之一是血管钙化研究。当在含有 β-甘油磷酸盐和抗坏血酸的钙化培养基中培养时，该 □胞系可在体外发生钙化，模拟了原代血管平滑肌 □胞中观察到的过程。MOVAS□胞表现出较高的碱性磷酸酶活性和钙沉积，这些是血管钙化的关键标志。 该模型还通过与原代小鼠主动脉血管平滑肌□胞（VSMCs）的对比验证，显示出对钙化条件以及左旋咪唑和依替膦酸等已知抑制剂治疗的反应与原代 □胞相当。这些特征使 MOVAS 成为原代血管平滑肌□胞的一种可靠且经济高效的替代品，既降低了实验变异性，又减少了伦理顾虑。

此外，MOVAS□胞已被用于探索胆固醇代谢——这一对动脉粥样硬化发展至关重要的过程。它们表达 ABCA1和ABCG1等必需的胆固醇转运蛋白，并展现出将胆固醇转运至 HDL和apoAI的功能。 胆固醇负荷实验证实，这些□胞能够转分化为巨噬□胞样□胞，这一过程与动脉粥样硬化斑块的形成密切相关。这些发现凸显了 MOVAS□胞在研究胆固醇稳态、表型可塑性以及血管疾病进展方面的实用价值。

Tissue	主动脉，平滑肌
Disease	正常

Synonyms

- Movas-1
- MOVAS-1
- Movas

CLASSIFICATION

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

GMO status details

GMO-S1: This murine vascular smooth muscle cell line (MOVAS) contains a retroviral construct encoding SV40 T-Antigen together with a neomycin resistance marker, supporting sustained proliferation and transformation. The insert is stably integrated. This classification applies only within Germany and may differ elsewhere.

Biosafety level	1

CHARACTERISTICS

Morphology	纤维母□胞样
Cell type	血管相关平滑肌□胞

IDENTIFIERS

Citation

MOVAS（Cytion 产品编号 305362）

NCBI TaxID	10090

Cellosaurus	CVCL_0F08

EXPRESSION AND SUSCEPTIBILITY

Protein expression

□□□□□□□□□□□□□□□α-□□□□□□□□□□1□□□□□□□□□□□□□□□□□□22□SM22α□

Viruses

□□□□ Simian virus 40 (SV40)

HANDLING AND CULTURE

Culture medium

DMEM□w□4.5 □/□□□□□w□4 □□□ L-□□□□□w□3.7 □/□ NaHCO3□w□1.0 □□□□□□□□Cytion □□ 820300a□□

Incubation atmosphere	37°C, 5%CO2, □□□□□

Supplements

□□□□□□□10% FBS□0.2 mg/mL G-418

Dissociation reagent	Accutase

Subculturing

□□□□□□□□□□□□□□□□□□□□□ PBS □□□T25 □□□ 3-5 □□ PBS□T75 □□□ 5-10 □□□□□□ Accutase □□□□□□□T25 □□□ 1-2 □□□T75 □□□ 2.5 □□□□□□□□□□□□ 8-10 □□□□□□□□□□□□□ 10 □□□□□□□□□□□□□□□□□□□ 300xg □□ 3 □□□□□□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□□□□□

Seeding density	1-3×10⁴/cm²
Fluid renewal	□□ 2 □ 3 □

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

□□□□ PCR □□□□□□□□□□□□□□□□□□□□□□□□□□□□□□
□□

Freeze medium	□□□□□□□□□□□□□□□ FBS□+10% DMSO □ CM-1□Cytion □□□□□□ 800100□□□□□□□□□ □□□□□□□□□□□□□□□□□CM-1□Cytion □□□□□□ 800100□□□□□□□□□□□□□□□□□□□□□ □□□□□□□□□□□□□□□□□

Storage conditions

□□□□□□□□□□□□□□□□□□□□□□□□□□□ -150 □ -196 ℃□□-80 °C□□□□□□□□□□□□□□□□□□□

Shipping conditions

冷冻保存的□胞系用干冰装运，并用经过验证的隔热包装和足够的制冷剂在整个运输过程中保持约 -78 °C 的温度。收到货后，应立即检查容器，并立即将小瓶转移到适当的储藏室。

DONOR

Breed / subspecies	C57BL/6
Donor age	成人

LEGAL AND SAFETY

Safety precautions

计划将低温样品储存在液氮中以便将来解冻时，必须遵守严格的安全措施。在将冷冻样本移入或移出液氮罐时，必须穿戴适当的防护手套和防护服，并使用面罩或安全护目镜。这样做是为了降低在移出时因冷冻样品爆炸而造成伤害的风险，因为爆炸可能导致锋利的碎片飞溅。

Warranty

在Cytion，我们保证产品的质量和活力。
我们保证，从我们的工厂发货后 60 天内，我们的□胞在开始培养时都是存活的。
我们保证所有材料均符合分析证书和/或产品说明书中描述的规格。
有关详□信息，请参阅我们的 <a href="" /Who-we-are/Warranty/"" hreflang=""x-default"">保修声明。

Material Transfer Agreement required	Yes

Cytion GmbH
Nikola-Tesla-Str. 3
69124 Heidelberg
Tel: +49 (0)6221 405780
info@cytion.com
cytion.com

Registered office Heidelberg
VAT ID: DE283292917
Local court Mannheim - HRB 714394
CEO / Geschäftsführer: Jonathan Steubing

Banking information
Sparkasse Heidelberg
IBAN: DE35 6725 0020 0009 2076 86
BIC: SOLADES1HDB