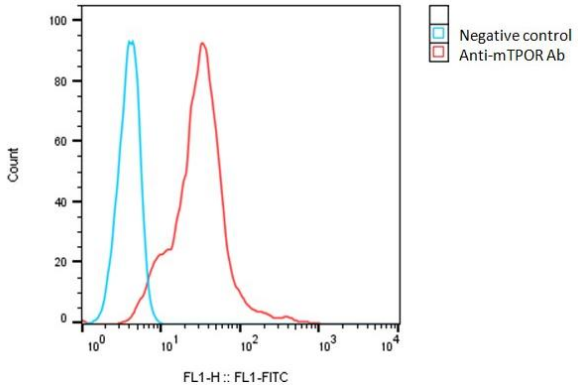
Mouse TPOR-CHO-K1 Stable Cell Line
Catalog Number: C3069

SPECIFICATIONS

Catalog Number	C3069
Cell Line Name	Mouse TPOR-CHO-K1 stable cell line
Accession Number	CAA52031.1
Host Cell	Adherent CHO-K1
Quantity	Two vials of frozen cells ($2x10^6$ per vial)
Culture Medium	DMEM with 10% FBS, 4μg/ml puromycin
Freezing Medium	90% FBS and 10% DMSO
Storage	Liquid nitrogen

DATA

Detection of mouse TPOR expression on mouse TPOR-CHO-K1 stable cells using a monoclonal antibody specific for mouse TPOR (Accurus, Cat. #A1021), followed by staining with FITC-anti goat antibody.



BACKGROUND

Mouse Thrombopoietin Receptor (TPOR), also known as MPL (Myeloproliferative Leukemia Virus Oncogene), plays a crucial role in hematopoiesis and is a key regulator of platelet production. TPOR is a transmembrane receptor that belongs to the cytokine receptor superfamily and is primarily expressed in hematopoietic cells. The primary function of mouse TPOR is to mediate the effects of Thrombopoietin (TPO), a hematopoietic growth factor. TPO binding to TPOR leads to receptor dimerization and activation of intracellular signaling pathways, including JAK-STAT and MAPK, ultimately resulting in the proliferation and differentiation of hematopoietic stem cells into megakaryocytes. These megakaryocytes subsequently produce platelets, making TPOR a critical regulator of thrombopoiesis. Alterations in TPOR expression and mutations in its gene have been associated with various hematological malignancies like overproduction of platelets and abnormal megakaryocyte development. Given its role in platelet production and its involvement in hematological disorders, mouse TPOR has emerged as a promising therapeutic target. These agents aim to regulate platelet production and restore normal hematopoiesis by modulating TPOR activity.

References

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Plo I, Bellanné-Chantelot C, Mosca M, Mazzi S, Marty C, Vainchenker W. Genetic Alterations of the Thrombopoietin/MPL/JAK2 Axis Impacting Megakaryopoiesis. *Front Endocrinol (Lausanne)*. **8**:234. 2017.

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