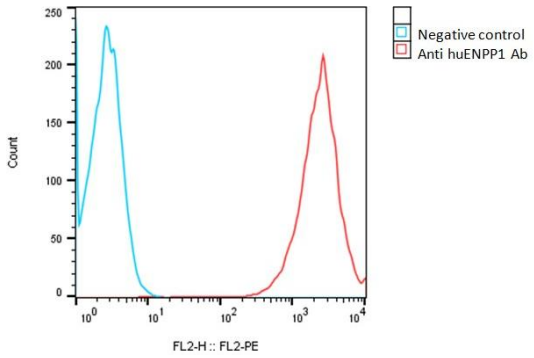
Human ENPP1-CHO-K1 Stable Cell Line
Catalog Number: C3050

SPECIFICATIONS

Catalog Number	C3050
Cell Line Name	Human ENPP1-CHO-K1 stable cell line
Accession Number	NP_006199.2
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 human ENPP1 expression on human ENPP1-CHO-K1 stable cells using a monoclonal antibody specific for human ENPP1 (Accurus Cat. #A1022), followed by staining with PE anti-human IgG antibody.



BACKGROUND

ENPP1 (Ectonucleotide Pyrophosphatase/Phosphodiesterase 1, PDNP1, PC1, PCA1, M6S1, LY41, CD203a) is a membrane-bound glycoprotein that belongs to the family of ectonucleotide pyrophosphatase/phosphodiesterase (ENPP) enzymes. ENPP1 is involved in a variety of physiological processes including bone mineralization, insulin signaling, and inflammation and is expressed in many tissues including bone, liver, adipose, and cartilage. ENPP1 has both pyrophosphatase and phosphodiesterase activities and plays a crucial role in regulating the levels of extracellular pyrophosphate, a mineralization inhibitor, in tissues such as bone and cartilage. It also serves as an inhibitor of insulin signaling, leading to insulin resistance in adipose tissue and skeletal muscle. In addition, ENPP1 has been implicated in cell adhesion, inflammation, and matrix calcification. ENPP1 is frequently overexpressed in local relapses and tumor metastases, which are associated with poor prognosis and survival in a range of solid tumors. ENPP1 promotes an immunosuppressive tumor microenvironment (TME) by tilting the balance of ATP/adenosine (Ado) in conjunction with other components (CD38, CD39/ENTPD1, and CD73/NT5E). Moreover, ENPP1 intersects with the stimulator of interferon genes (STING), impairing its robust immune response through the hydrolysis of the effector 2′,3′-cyclic GMP–AMP. Thus, ENPP1 blockade emerges as a unique target eliciting immune remodeling and leveraging the STING pathway for cancer treatment.

References

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