

Human BTN3A2 Protein; His Tag

Product Information

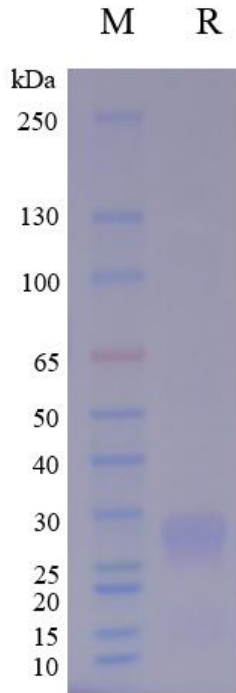
Product Name	Human BTN3A2 Protein; His Tag
Storage temp	Store at $\leq -70^{\circ}\text{C}$, stable for 6 months after receipt. Recommend to aliquot the protein into smaller quantities for optimal storage. Please minimize freeze-thaw cycles.
Catalog# / Size	GM-88577RP-100 / 100 μg GM-88577RP-1000 / 1 mg

Protein Information

Alternative Names	BT3.2,BT3.3,BTF3,BTF4
Source	Human BTN3A2 Protein; His Tag (GM-88577RP) is expressed from human 293 cells (HEK-293). It contains AA Gln 30 - Trp 248 (Accession # P78410-1). This protein carries a His tag at the C-terminus.
Purity	> 95% as determined by SDS-PAGE
Endotoxin	< 1 EU/ μg , determined by LAL gel clotting assay
Predicted Mol Mass	24.4 KDa
Formulation	Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.
Description	BTN3A2 protein is a member of the butyrophilin (BTN) family, which belongs to the immunoglobulin superfamily. It is encoded by the BTN3A2 gene (also known as CD277) and is a protein associated with the human immune system. BTN3A2 protein was initially discovered in lymphoid tissues and later detected in various other tissues, including epithelial cells and tumor cells. BTN3A2 protein regulates the activity of $\gamma\delta$ T cells (gamma-delta T cells) by binding to the T cell receptor (TCR) complex on the surface of $\gamma\delta$ T cells, particularly the V γ 9V δ 2 T cell subset. $\gamma\delta$ T cells are an important type of lymphocyte with the ability to directly kill tumor cells and infected cells, making them crucial members of the immune system. BTN3A2 functions as a key molecular switch that, upon sensing phosphoantigens produced by stressed or malignant cells, triggers the activation of $\gamma\delta$ T cells. Research indicates that BTN3A2 protein plays a significant role in regulating the activity of $\gamma\delta$ T cells, promoting cytotoxicity against tumor cells, and modulating immune responses. Additionally, the expression of BTN3A2 protein is associated with tumor development and immune evasion. Dysregulation of BTN3A2 expression or function can impair $\gamma\delta$ T cell-mediated immune surveillance, making it a potential target for $\gamma\delta$ T cell-based immunotherapies and cancer treatment.

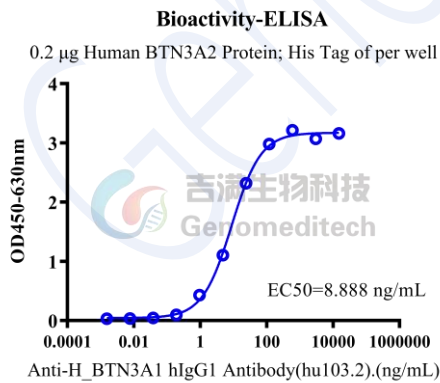
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SDS-PAGE

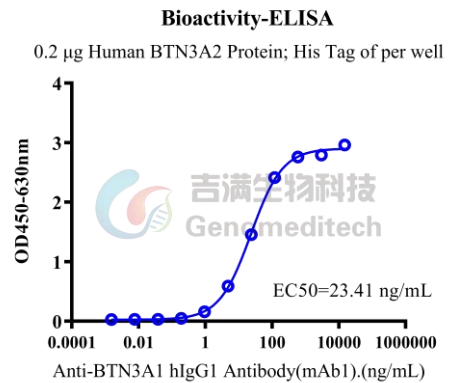


On SDS-PAGE under reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Human BTN3A2 Protein; His Tag (Catalog # GM-88577RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Anti-H_BTN3A1 hIgG1 Antibody (hu103.2) (Catalog # GM-52829AB) were added.



Human BTN3A2 Protein; His Tag (Catalog # GM-88577RP) was immobilized at 2 μ g/ml (100 μ L/well). Increasing concentrations of Anti-BTN3A1 hIgG1 Antibody (mAb1) (Catalog # GM-52838AB) were added.