

Human BTN3A1 Protein; His Tag

Product Information

Product Name Human BTN3A1 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-88576RP-100 / 100 μg
GM-88576RP-1000 / 1 mg

Protein Information

Alternative Names BTN3A1,CD277,BTF5

Source Human BTN3A1 Protein; His Tag (GM-88576RP) is expressed from human 293 cells (HEK-293). It contains AA Gln 30 - Gly 254 (Accession # O00481-1). 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

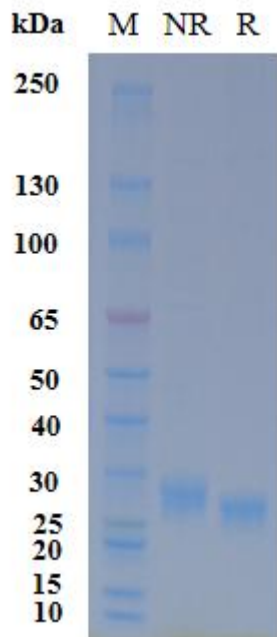
Predicted Mol Mass 25.0 KDa

Formulation Supplied as a 0.2 μm filtered solution of PBS, pH7.2-7.4.

Description BTN3A1 (butyrophilin subfamily 3 member A1, also known as CD277) is an immunoregulatory receptor belonging to the BTN/BTNL family within the extended B7 superfamily. It is broadly expressed on antigen-presenting cells, many hematopoietic cells, and various epithelial and tumor cells. BTN3A1 plays a pivotal role in modulating both innate and adaptive immunity, most notably by controlling the activation of human $\text{V}\gamma 9\text{V}\delta 2$ cells. Through its intracellular B30.2 domain, BTN3A1 senses phosphoantigens derived from microbes or dysregulated cell metabolism and transduces conformational changes to the cell surface, thereby triggering $\text{V}\gamma 9\text{V}\delta 2$ cell activation, cytokine production, and cytotoxic responses.

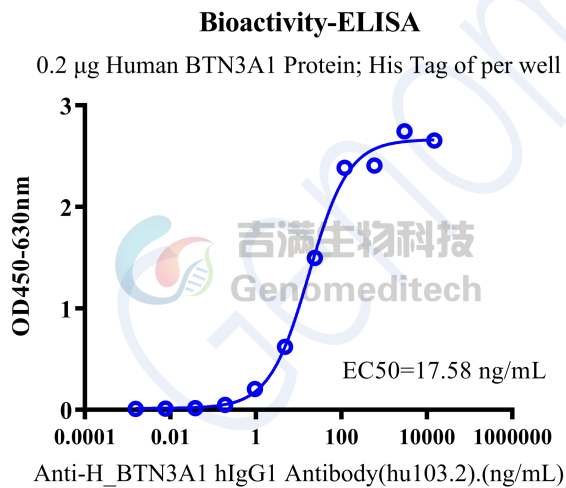
Beyond phosphoantigen sensing, BTN3A1 contributes to the fine-tuning of T-cell responses, influencing immune surveillance, tolerance, and inflammation within the tumor microenvironment, autoimmune settings, and chronic infection. Dysregulation of BTN3A1 signaling has important implications for cancer immunotherapy and $\gamma\delta$ T-cell-based therapies. Recombinant Human BTN3A1 Protein with a His tag is widely used to study BTN3A1 ligand interactions, phosphoantigen dependent $\gamma\delta$ T-cell activation, and downstream signaling pathways. It also serves as a valuable reagent for antibody discovery and functional characterization, assay development, and the evaluation of novel immunotherapeutic strategies targeting the BTN3A1/ $\gamma\delta$ T-cell axis. Version:4.0

SDS-PAGE

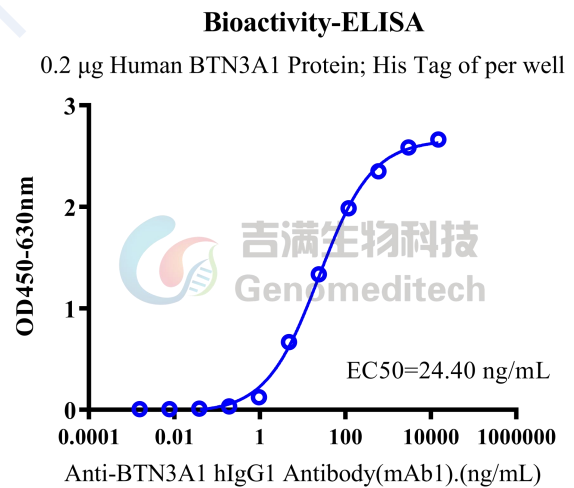


On SDS-PAGE under non-reducing (NR) condition and reducing (R) condition. The gel was stained overnight with Coomassie Blue. The purity of the protein is greater than 95%.

Bioactivity-ELISA



Human BTN3A1 Protein; His Tag (Catalog # GM-88576RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-H_BTN3A1 hIgG1 Antibody (hu103.2) (Catalog # GM-52829AB) were added.



Human BTN3A1 Protein; His Tag (Catalog # GM-88576RP) was immobilized at 2 µg/ml (100 µL/well). Increasing concentrations of Anti-BTN3A1 hIgG1 Antibody (mAb1) (Catalog # GM-52838AB) were added.