

BTN3A1 Protein, Human, Recombinant (His & Avi), Biotinylated

General Information

Synonyms:	CD277;BTN3A1;BTF5;BT3.1;BTN3.1
Protein Construction:	Gln30-Gly254
Species:	Human
Expression Host:	HEK293 Cells
Accession:	O00481-1
Molecular Weight:	27.1 kDa (predicted). Due to glycosylation, the protein migrates to 30-35 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Anti-BTN3A1 Antibody, hFc Tag at 2µg/ml (100µl/well) on the plate. Dose response curve for Biotinylated Human BTN3A1, His Tag with the EC50 of 15.4ng/ml determined by ELISA.
Purity:	> 95% as determined by Tris-Bis PAGE; > 95% as determined by HPLC
Endotoxin:	< 1.0 EU/µg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 µm filter, containing PBS (pH 7.4). Typically, 8% trehalose is incorporated as a protective agent before lyophilization.

Preparation and Storage

Reconstitution:
Reconstitute the lyophilized protein in distilled water. The product concentration should not be less than 100 µg/ml. Before opening, centrifuge the tube to collect powder at the bottom. After adding the reconstitution buffer, avoid vortexing or pipetting for mixing.

Stability & Storage:

It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.

Actual storage temperature shall be subject to the COA.

Shipping:

In general, lyophilized powders are shipped with blue ice, while solutions are shipped with dry ice.

Protein Background

The three butyrophilin BTN3A molecules, BTN3A1, BTN3A2, and BTN3A3, are members of the B7/butyrophilin-like group of Ig superfamily receptors, which modulate the function of T cells. BTN3A1 controls activation of human Vγ9/Vδ2 T cells by direct or indirect presentation of self and nonself phosphoantigens (pAg).

Reference

Rhodes DA, et al. Activation of human $\gamma\delta$ T cells by cytosolic interactions of BTN3A1 with soluble phosphoantigens and the cytoskeletal adaptor periplakin. J Immunol. 2015 Mar 1;194(5):2390-8. doi: 10.4049/jimmunol.1401064. Epub 2015 Jan 30. PMID: 25637025; PMCID: PMC4337483.
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Tel:781-999-4286 E_mail:info@targetmol.com Address:34 Washington Street,Wellesley Hills,MA 02481