# Recombinant Human BTN3A2

Catalog Number: 9514-BT

## DESCRIPTION

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|---|---|
| **Source** | Chinese Hamster Ovary cell line, CHO-derived<br>Gln30-Trp248, with a C-terminal 6-His tag<br>Accession # P78410-1 |
| **N-terminal Sequence Analysis** | Gln30 |
| **Predicted Molecular Mass** | 24 kDa |

## SPECIFICATIONS

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| **SDS-PAGE** | 26-35 kDa, reducing conditions |
| **Activity** | Measured by its ability to enhance anti-CD3-induced IFN-γ secretion of mouse $CD3^+$ T cells.<br>The $ED_{50}$ for this effect is 0.5-2.5 µg/mL. |
| **Endotoxin Level** | <0.10 EU per 1 µg of the protein by the LAL method. |
| **Purity** | >95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining. |
| **Formulation** | Lyophilized from a 0.2 µm filtered solution in PBS. See Certificate of Analysis for details. |

## PREPARATION AND STORAGE

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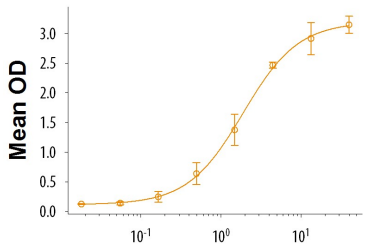
| **Reconstitution** | Reconstitute at 200 µg/mL in PBS. |
| **Shipping** | The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. |
| **Stability & Storage** | **Use a manual defrost freezer and avoid repeated freeze-thaw cycles.**<br>● 12 months from date of receipt, -20 to -70 °C as supplied.<br>● 1 month, 2 to 8 °C under sterile conditions after reconstitution.<br>● 3 months, -20 to -70 °C under sterile conditions after reconstitution. |

## DATA

**Bioactivity**




Recombinant Human BTN3A2 (Catalog # 9514-BT) enhances anti-CD3 antibody induced IFN-γ secretion by mouse $CD3^+$ T cells. The $ED_{50}$ for this effect is 0.5-2.5 µg/mL.

## BACKGROUND

BTN3A2 (Butyrophilin subfamily 3 member A2; also BTF3 and BT3.2) is a 36 kDa (predicted) glycoprotein, member of the BTN family, Ig Superfamily of molecules. It is postulated to be expressed on immune-related cells, as it has a structural similarity to MHC and CD80/CD86 molecules. Mature human BTN3A2 is a 305 amino acid (aa) type I transmembrane protein. It contains a 219 aa extracellular region with one V-type Ig-like domain and a 65 aa cytoplasmic tail. The cytoplasmic region undergoes phosphorylation on two serines. There are three potential splice forms. A rodent counterpart to BTN3A2 has not been reported. BTN3A2 mRNA over-expression was associated with a good prognosis in relation to disease-free and overall survival in a cohort of 55 epithelial ovarian cancer (EOC) patients (1). Another study in a larger cohort of 199 high-grade EOC patients further confirmed that the protein expression of BTN3A2 in ovarian cancer tissues is positively correlated with the intraepithelial infiltration of $CD4^+$ and $CD8^+$ T cells (2), suggesting that BTN3A2 was a co-stimulatory molecule to modulate the infiltration of immune cells and thus the anti-cancer immunity. In consistent with previous publications, our in-house studies on BTN3A2 showed that BTN3A2 co-stimulated anti-CD3 induced IFN-γ secretion on $CD3^+$ cells.

**References:**


1. LePage C, *et al.* Cancer Epidemiol Biomarkers Prev (2008) **17**:913.
2. LePage C, *et al.* PLoSOne (2012) **7**:e38541.

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