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RDSYSTEMS

Catalog Number: 11521-BT

DESCRIPTION				
Source	Human embryonic kidney cell, HEK293-derived human BTN2A1 protein			
	Human BTN2A1 (Gln29-Ala248) Accession # Q7KYR7.3	IEGRMD	Human IgG ₁ (Pro100-Lys330)	
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Identity confirmed by protein ID			
Predicted Molecular Mass	51 kDa			
Mass				
SPECIFICATIONS				

SPECIFICATIONS			
SDS-PAGE	60-80 kDa, under reducing conditions.		
Activity	Measured by its binding ability in a functional ELISA. Recombinant Human BTN2A1 Fc Chimera binds to biotinylated DC-SIGN Fc Chimera with a ED ₅₀ of 1.00-10.0 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 with Trehalose. See Certificate of Analysis for details.		

PREPARATION AND STORAGE			
Reconstitution	Reconstitute at 500 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.		
	 12 months from date of receipt, -20 to -70 °C as supplied. 		
	1 month, 2 to 8 °C under sterile conditions after reconstitution.		
	 3 months, -20 to -70 °C under sterile conditions after reconstitution. 		



Rev. 4/19/2024 Page 1 of 2

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bio-techne® RDSYSTEMS

Recombinant Human BTN2A1 Fc Chimera

Catalog Number: 11521-BT

BACKGROUND

Butyrophilin 2A1 (BTN2A1) is a type I transmembrane glycoprotein of the butyrophilin family within the Ig-superfamily. There are over 13 Butyrophilin and the closely related butyrophilin-like (BTNL) molecules and they have been identified as immune checkpoint receptors involved in modulating T cell function (1,2). Mature human BTN2A1 consists of an extracellular domain (ECD) with two immunoglobulin-like domains (one IgV and one IgC), a transmembrane segment, and a cytoplasmic region with a B30.2 domain (3). Alternative splicing generates additional isoforms of BTN2A1 that lack the first Ig-like domain or the transmembrane segment as well as isoforms with substitutions and deletions in the cytoplasmic region. BTN2A1 is widely expressed including on colonic epithelial cells, on immune cells, and in milk fat globules (4, 5). BTN2A1 binds to the C-type lectin DC-SIGN on monocyte-derived dendritic cells, and this interaction can be blocked by soluble gp130 from HIV (4). A polymorphism of BTN2A1 has been associated with metabolic syndromes, type II diabetes mellitus, chronic kidney disease, and hypertension (6, 7).

References:

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- 2. Afrache, H. et al. (2012) Immunogenetics 64:781.
- 3. Tazi-Ahnini, R. et al. (1997) Immunogenetics 47:55.
- 4. Malcherek, G. et al. (2007) J. Immunol. 179:3804.
- 5. Cavaletto, M. et al. (2002) Proteomics 2:850.
- 6. Oguri, M. et al.(2011) J. Med. Genet. 48:787.
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