# **Elabscience**®

# Recombinant Human Butyrophilin Subfamily 1 Member A1/BTN1A1 (C-Fc)

## Catalog Number: PKSH033945

Note: Centrifuge before opening to ensure complete recovery of vial contents.

| Description    |  |  |
|----------------|--|--|
| Species        | Human  |  |
| Source         | HEK293 Cells-derived Human BTN1A1 protein Ala27-Arg242, with an C-terminal Fc          |  |
| Calculated MW  | 50.8 kDa   |  |
| Observed MW    | 60-80 kDa  |  |
| Accession      | Q13410   |  |
| Bio-activity   | Not validated for activity   |  |
| Properties     |  |  |
| Purity         | > 95 % as determined by reducing SDS-PAGE.   |  |
| Endotoxin      | < 1.0 EU per µg of the protein as determined by the LAL method.                        |  |
| Storage        | Generally, lyophilized proteins are stable for up to 12 months when stored at -20 to - |  |
|                | °C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of    |  |
|                | reconstituted samples are stable at $< -20^{\circ}$ C for 3 months.                    |  |
| Shipping       | This product is provided as lyophilized powder which is shipped with ice packs.        |  |
| Formulation    | Lyophilized from a 0.2 µm filtered solution of PBS, pH 7.4.                            |  |
|                | Normally 5% - 8% trehalose, mannitol and 0.01% Tween 80 are added as protectants       |  |
|                | before lyophilization.   |  |
|                | Please refer to the specific buffer information in the printed manual.                 |  |
| Reconstitution | Please refer to the printed manual for detailed information.                           |  |

### Data

| kDa       | MK | R |
|-----------|----|---|
| 120<br>90 | =  |   |
| 60        | '  |   |
| 40        |    |   |
| 30        |    |   |
| 20        | -  |   |
| 14        | _  |   |

> 95 % as determined by reducing SDS-PAGE.

### Background

Butyrophilin Subfamily 1 Member A1 (BTN1A1) is the major protein associated with fat droplets in the milk. It belongs the immunoglobulin superfamily. BTN1A1 acts as a specific membrane-associated receptor for the association of cytoplasmic droplets with the apical plasma membrane. It is localized to the major histocompatibility complex (MHC) class I region of 6p. It may have arisen relatively recently in evolution by the shuffling of exons between 2 ancestral gene families. It is shown that BTN1A1 inhibits the proliferation of CD4 and CD8 T-cells activated by anti-CD3 antibodies, T-cell metabolism and IL2 and IFNG secretion.