Data Sheet (Cat.No.TMPK-01140)

TargetMol

KLRG1 Protein, Human, Recombinant (hFc)

General Information

Synonyms:	MAFAL;2F1;CLEC15A;KLRG1;MGC13600;MAFA;CLEC15AMAFA-LIKE
Protein Construction:	Leu60-Phe195
Species:	Human
Expression Host:	HEK293 Cells
Accession:	Q96E93-1
Molecular Weight:	42.8 kDa (predicted). Due to glycosylation, the protein migrates to 50-65 kDa based on Tris-Bis PAGE result.

QC Testing

Biological Activity:	Immobilized Human KLRG1, hFc Tag at 0.5μg/ml (100μl/Well) on the plate. Dose response curve for Biotinylated Anti-KLRG1 Antibody, hFc Tag with the EC50 of 20.8ng/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

Immune homeostasis requires the tight, tissue-specific control of the different CD4 Foxp3 regulatory T (Treg) cell populations. The cadherin-binding inhibitory receptor killer cell lectin-like receptor G1 (KLRG1) is expressed by a subpopulation of Treg cells with GATA3 effector phenotype.Lack of KLRG1 on Treg cells conferred on them a competitive advantage in the gut, but not in lymphoid organs. Hence, although absence of KLRG1 is not enough to

increase intestinal Treg cells in KLRG1 knockout mice, KLRG1 ligation reduces T-cell receptor signals and the competitive fitness of individual Treg cells in the intestine.

Reference

Meinicke H, et al. KLRG1 impairs regulatory T-cell competitive fitness in the gut. Immunology. 2017 Sep;152(1):65-73. doi: 10.1111/imm.12749. Epub 2017 Jun 20. PMID: 28437578; PMCID: PMC5543461.

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