

Recombinant Mouse IL-Y (IL-12p40/IL-27p28)

Catalog Number: 9989-IL

DESCRIPTION				
Source	Mouse myeloma cell line, NS0-derived mouse IL-Y (IL-12p40/IL-27p28) protein			
	Mouse IL-12p40 (Met23-Ser335) Accession # P43432	GGGSGGGGGGS	Mouse IL-27p28 (Phe29-Ser234) Accession # Q8K3I6	
	N-terminus		C-terminus	
N-terminal Sequence Analysis	Met23 (IL-12p40)			
Structure / Form	Disulfide-linked homodimer			
Predicted Molecular Mass	60 kDa			

SPECIFICATIONS		
SDS-PAGE	74-84 kDa, reducing conditions	
Activity	Measured by its ability to inhibit IL-12 induced IFN-γ secretion by mouse splenocytes. The ED ₅₀ for this effect is 10-60 ng/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			
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	 12 months from date of receipt, ≤ -20 °C as supplied. 1 month, 2 to 8 °C under sterile conditions after reconstitution. 3 months, ≤ -20 °C under sterile conditions after reconstitution. 		



BACKGROUND

IL-Y is a new member of the IL-12 cytokine family consists of IL-12p40 and IL-27p28 subunits (1, 2, 3). The mature mouse IL-12p40 subunit contains 312 amino acids and shares 66% and 93% amino acid (aa) identity with human and rat IL-12p40, respectively. The mature mouse IL-27p28 subunit contains 205 amino acids and shares 70% and 89% aa identity with human and rat IL-27p28, respectively. IL-Y inhibits the differentiation and inflammatory responses of Th1 and Th17 cells while promoting expansion of IL-10 and Foxp3 expressing regulatory T cells (3). Treatment of prediabetic non-obese diabetic mice using adenovirus vector expressing IL-Y prevents the onset of hyperglycemia with reduced expression of inflammatory mediators such as IFN-γ. IL-Y significantly stimulates a unique cytokine and chemokine expression profile as well as to activate STAT3, in part, through a pathway involving WSX-1 (2).

References:

- 1. Hasegawa, H. et al. (2016) Frontiers in Immunology 7:479.
- 2. Flores, R. et al. (2015) Eur J Immunol. 45:3114.
- 3. Wang, R. et al. (2012) The Journal of Biological Chemistry 287:36012.

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