

DESCRIPTION

Source	Mouse myeloma cell line, NS0-derived mouse IL-Y (IL-12p40/IL-27p28) protein		
	Mouse IL-12p40 (Met23-Ser335) Accession # P43432	GGGSGGGSGGGS	Mouse IL-27p28 (Phe29-Ser234) Accession # Q8K316
	N-terminus		C-terminus
N-terminal Sequence Analysis	Met23 (IL-12p40)		
Structure / Form	Disulfide-linked homodimer		
Predicted Molecular Mass	60 kDa		

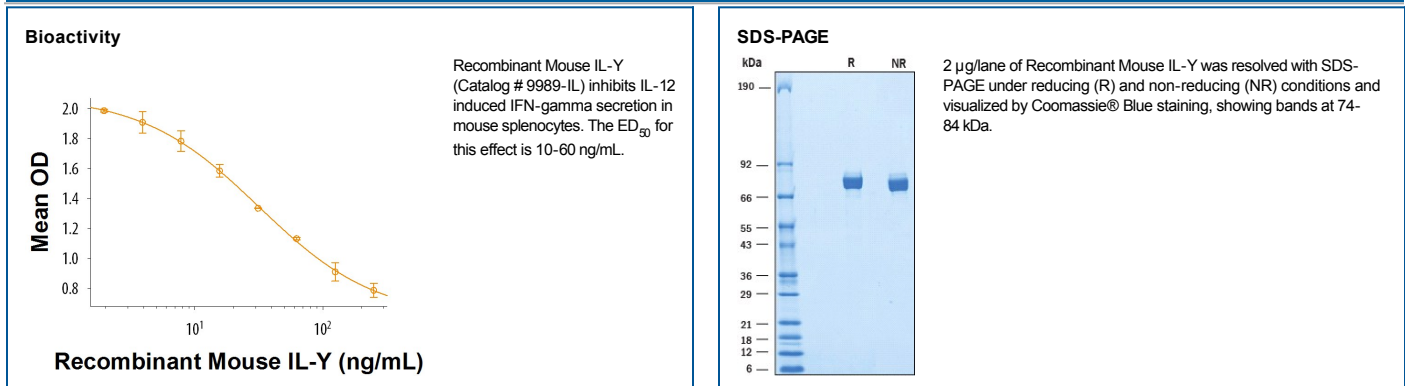
SPECIFICATIONS

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 μ g 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 μ m filtered solution in PBS. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 μ g/mL in PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<ul style="list-style-type: none"> • 12 months from date of receipt, \leq -20 °C as supplied. • 1 month, 2 to 8 °C under sterile conditions after reconstitution. • 3 months, \leq -20 °C under sterile conditions after reconstitution.

DATA



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.