

PRODUCT INFORMATION SUMMARY: BABY RABBIT COMPLEMENT

Pel-Freez Biologicals is your #1 source for Baby Rabbit Complement for use in vaccine immunogenicity and efficacy testing.

Baby rabbit complement (BRC) has long been the World Health Organization's recommended standard complement option for the *in vitro* opsonophagocytic assay (OPA), a functional antibody assay used to evaluate vaccine immunogenicity and efficacy¹⁻³. Pel-Freez Biologicals is a leading source of BRC for OPAs and has been used by top vaccine programs for many years.

The principle of the OPA assay relies on the natural interactions among pathogen-specific antibodies elicited by infection or vaccination, the pathogen, complement serum, and host effector cells. Complement serum plays a key role in this interaction by facilitating recognition of antibody-coated bacteria by effector cells leading to bacterial lysis - a process known as opsonization. The OPA mimics this natural process and has been used for many years to measure the functionality of these pathogen-specific antibodies.

Baby rabbit complement is a key reagent in OPAs and has been successfully utilized to evaluate vaccine immunogenicity and efficacy for bacterial vaccines including Gram positive *Streptococcus pneumoniae*¹⁻³ and Group B *Streptococcus*⁴.

Advantages of sourcing BRC from Pel-Freez Biologicals:

- Large scale production of 5 to 10 L lots
- Extensive quality control testing
- Consistent manufacturing following Pel-Freez' ISO 9001:2015 QMS
- Pel-Freez' BRC is widely accepted by vaccine programs globally

Pel-Freez Biologicals' BRC is manufactured according to established protocols and undergoes quality control testing to ensure consistent performance. Hemolytic titer testing ensures adequate complement activity while sterility, endotoxin, mycoplasma and viral testing ensure low or absent levels of interfering contaminants. All sterile-filtered products undergo sterility testing according to U.S. Pharmacopeia guidelines. All products must meet or exceed minimum standards prior to sale.



"Pel-Freez is our go-to provider of essential reagents such as lyophilized rabbit complement and immunoglobulin-depleted human serum. These quality products allow us to perform our in-house opsonophagocytic killing assays and move rapidly on product development. We have ordered from Pel-Freez for over a decade and they are always willing to go above and beyond in making sure we can obtain the right product for our specific research needs."

	Product Code	Aliquot Size	Specifications
Baby Rabbit Complement	31061-1	10 mL	
31061: Frozen liquid	31061-3	100 mL	Hemolytic Titer: $\geq 1:16$ Endotoxin: ≤ 1.0 EU/mL Sterility: 14 day culture
31064: Lyophilized powder	31064-2	1 x 2 mL	Mycoplasma: Negative Viral: Negative
	31064-5	5 x 2 mL	

Table 1. Baby rabbit complement pack sizes and specifications.



Dr. Joseph E. Martinez
President, Immune Diagnostics
Former Vaccine Scientist, CDC

Visit www.pel-freez.com to learn more and download our white paper entitled *Technical Guide for Sourcing Complement Serum for Vaccine Immunogenicity and Efficacy Testing*.

References:

1. Romero-Steiner S, Frasch C, Concepcion N, Goldblatt D, Kayhty H, Vakevainen M, Laferriere C, Wauters D, Nahm MH, Schinsky MF, Plikaytis BD and Carlone GM. Multilaboratory evaluation of a viability assay for measurement of opsonophagocytic antibodies specific to the capsular polysaccharides of *Streptococcus pneumoniae*. 2003. *Clin Diagn Lab Immunol*. 10:1019-1024. DOI: 10.1128/CDLI.10.6.1019-1024.2003.
2. WHO Workshop on standardization of pneumococcal opsonophagocytic assay. Geneva, Switzerland. 25-26 January 2007.
3. Burton RL and Nahm MH. Development and validation of a fourfold multiplexed opsonization assay (MOPA4) for pneumococcal antibodies. 2006. *Clin Vaccine Immunol*. 13:1004-1009. DOI: 10.1128/CVI.00112-06.
4. Guttormsen H-K, Mascuch SJ, West JC and Paoletti LC. A fluorescence-based opsonophagocytosis assay to measure the functional activity of antibody to group B *Streptococcus*. 2009. *Human Vaccines*. 5:461-466, DOI: 10.4161/hv.8376.

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