

# ADJUVANT PLUS #3113

## For polyclonal antibody production

An Adjuvant for commercial use, developed and proven particularly for the action in small and medium size animals. Powerful potentiator of cellular and humoral immune response. Particularly mild and simple to handle, just mix with antigen and inject. All components are non-toxic, fully biocompatible, and very animal-friendly. High cost-benefit ratio of GERBU Complete Adjuvant (GCA, P) and GERBU Incomplete Adjuvant (GIA, S).

### Suggestion for Use

<b>Storage:</b>	4-8°C. Ready-made mixture should be stored frozen. Bring to room temperature prior to use.
<b>Withdrawal:</b>	Use a sterile plastic syringe, mix with antigen solution and shake.
<b>Dilution Rate:</b>	Standard rate is 1:1 with antigen solution, but other ratios are no problem as long as the recommended volume of adjuvant is used and the maximum injection volume at each site not exceeded.
<b>Diluent:</b>	Use water as the diluent. If buffer is necessary, please check before, that the used antigen does not coagulate in the diluent/adjuvant emulsion with applied pH value.
<b>Route of application:</b>	Preferably subcutaneous. Intraperitoneal application is possible but not recommended.
<b>No. of injection sites:</b>	For optimum effect, more sites are always better (column 5)
<b>Maximum injection volume per site:</b>	Recommendations are given by various Animal Protection Councils all over the world: - Leenaars, M. et al (1999) ATLA 27, 79-102. - Nicklas, W., Cußler, K., & Hartinger, J. T. (1998) TVT, Tierschutzaspekte bei der Immunisierung von Versuchstieren.
<b>Stability of Antigen-Adjuvant mix:</b>	Recommending to use Antigen-Adjuvant mixture directly after preparation.

### Table of Doses and Application

Animal Species	weight	1	2	3	4	5	6								
							Adjuvant dose	Injection volume / total	Injection volume / site	Number of injection sites	Boosting days / Adjuvant Type				
Mouse	30g		50µl	100µl	100µl	1									
Rat / Hamster	100-200g		100µl	200µl	200µl	1									
Guinea pig	500g		250µl	500µl	250µl	2									
Chicken	1,5kg		250µl	500µl	250µl	2									
Rabbit	3 kg		1 ml	2 ml	500 µl	4									
Minipig	10 kg		2.5ml	5ml	1.25ml	4									
Pig	50 kg		4 ml	8 ml	1.5 ml	5									
Goat/Sheep	50 kg		5 ml	10 ml	2 ml	5									

### Compatibility

All components are proven to be orally and parenterally nontoxic. Generally subcutaneous application works just as well as i/m or i/p and is definitely better tolerated. Chicken especially were observed to stop laying eggs after i/m injections into the breast muscle. GMDP has been found to be pyrogenic in doses over 10 µg/kg body mass.

### Active Ingredients

The effectivity of GERBU Adjuvant is based on the synergistic action of the muramyl glycopeptides and solid ultrafiltrable particles of slowly biodegradable lipids added in order to impart the positive electric charges beneficial for optimal efficiency. Equally important are the immunopotentiating, biocompatible emulsifiers and the carefully adjusted synergistic and stabilizing medium which surrounds the nanoparticles.

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