



WorkBeads affimAb BabyBio affimAb 1mL BabyBio affimAb 5mL



WorkBeads™ affimAb resin is an alkaline-stable resin designed for purification of monoclonal and polyclonal antibodies in laboratory to process scale. This resin has a superior basematrix in combination with an optimized alkaline-stable protein A ligand. This results in high dynamic binding capacity also at short residence times, and stable capacity over multiple purification cycles with cleaning-in-place using 0.5 M NaOH.

Prepacked BabyBio affimAb 1mL and 5mL columns are available for small-scale purifications and condition screening in process development. WorkBeads affimAb resin can also be used for purifications in other formats, such as batch and centrifugation purifications.

- Top performance dynamic binding capacity also at short residence times
- Outstanding alkaline stability with 0.5 M NaOH, extends the number of purification cycles
- Excellent purity, recovery and reproducibility
- Negligible protein A leakage
- Convenient prepacked 1mL and 5mL BabyBio™ columns

Media Description

WorkBeads are agarose based chromatographic resins manufactured by a proprietary method that results in porous beads with a tight size distribution and very high mechanical stability. Agarose based matrices have been successfully used for decades in biotechnology research from laboratory to production scale, due to their exceptional compatibility with biomolecules including proteins, peptides, nucleic acids and carbohydrates. WorkBeads resins are designed for separations requiring optimal capacity and purity.

The alkaline stable recombinant protein A attached to the optimized basematrix is produced in *E. coli* under conditions free of components of animal origin and purified to high purity before coupling. This combination gives both high dynamic binding capacities for antibodies and the possibility for efficient cleaning-in-place with 0.5 M NaOH.

The specificity of the recombinant protein A for the Fc region of IgG provides excellent purification. Each batch of protein A is tested according to stringent requirements.

The high capacity, chemical stability and the optimized agarose matrix make WorkBeads affimAb ideal for purification of monoclonal antibodies (mAb) as well as polyclonal antibodies. For convenient small-scale purifications of antibodies WorkBeads affimAb is available prepacked in BabyBio affimAb 1mL and 5mL columns.

The main characteristics of WorkBeads affimAb resin are shown in Table 1.

Table 1. Main characteristics of WorkBeads affimAb resin.

WorkBeads affimAb	
Target substance	Antibodies (IgG), bound via the Fc region
Matrix	Rigid, highly cross-linked agarose
Average particle size ¹ (Dv50)	50µm
Ligand	Recombinant protein A expressed in <i>E. coli</i> using animal-free medium
Dynamic binding capacity ² (DBC)	> 40mg human IgG/ml resin
Max recommended flow rate ³	300cm/h
Chemical stability	Compatible with all standard aqueous buffers Used for protein purification 10M HCl (pH 2), 0.5M NaOH (pH 12), 0.1M sodium citrate buffer (pH 3), 6M guanidine-HCl, 20% ethanol. Should not be stored at low pH for prolonged time.
pH stability	3 - 10
Cleaning-in-place stability	Up to 0.5 M NaOH
Storage	2 to 8 °C in 20 % ethanol

1. The median particle size of the cumulative volume distribution.

2. DBC was determined at 10% breakthrough (QB10%) by frontal analysis with 1mg/mL human polyclonal IgG in PBS, pH 7.4 at 1.4mL/min (245cm/h, 2.5 minutes residence time) in a column packed with WorkBeads affimAb resin, column bed 6.6x100mm.

3. Max recommended flow rate at 20°C using aqueous buffers. Decrease the max flow rate if the liquid has a higher viscosity. Higher viscosities can be caused by low temperature (use half of the max flow rate when operating at 4°C), or by additives (e.g., use half of the max flow rate for 20% ethanol).

BabyBio column description

The BabyBio column hardware's are made from biocompatible polypropylene which does not significantly interact with biomolecules. The top and bottom filters are made from low protein binding polyethylene. The ready to use BabyBio columns are delivered with a plug in the inlet, a cut-off outlet and a cap for storage. The columns can be connected to a syringe, pump or chromatography system using finger tight fittings (coned 10-32) for 1/16" o.d. tubing (standard HPLC PEEK fittings and tubings).

The main characteristics of BabyBio affimAb columns are shown in Table 2.

Table 2. Main characteristics of BabyBio affimAb 1 ml and BabyBio affimAb 5 ml columns.

BabyBio affimAb	
Target substance	Antibodies (IgG), bound via the Fc-region
Resin	WorkBeads affimAb
Matrix	Rigid, highly cross-linked agarose
Average particle size ¹ (Dv50)	50µm
Ligand	Recombinant protein A expressed in E. coli Using animal-free medium
Dynamic binding capacity ² (DBC)	> 40mg human IgG/ml resin
Column volume	1mL 5mL
Column dimension	7 x 28mm (1mL) 13 x 38mm (5mL)
Recommended flow rate	
BabyBio affimAb 1mL	0.5-1mL/min (75-150cm/h)
BabyBio affimAb 5mL	1-4mL/min (45-180cm/h)
Maxflow rate ³	
Ba	4 ml/min (620 cm/h)
Ba	15 ml/min (670 cm/h)
Maximum back pressure	0.3MPa, 3bar, 43psi
Chemical stability	Compatible with all standard aqueous buffers used for protein purification 10M HCl (pH 2), 0.5M NaOH (pH 12), 0.1M sodium citrate Buffer (pH 3), 6M guanidine-HCl, 20% ethanol. Should not be stored at low pH for prolonged time.
pH stability	3 - 10
Cleaning-in-place stability	Up to 0.5M NaOH
Storage	2 to 8°C in 20% ethanol

1. The median particle size of the cumulative volume distribution.

2. DBC was determined at 10% breakthrough (QB10%) by frontal analysis with 1 mg/ml human polyclonal IgG in PBS, pH 7.4 at 1.4mL/min (245cm/h, 2.5 minutes residence time) in a column packed with WorkBeads affimAb resin, column bed 6.6x100mm.

3. Max recommended flow rate at 20°C using aqueous buffers. Decrease the max flow rate if the liquid has a higher viscosity. Higher viscosities can be caused by low temperature (use half of the max flow rate when operating at 4°C), or by additives (e.g., use half of the max flow rate for 20% ethanol).

Ordering Information

Product name	Pack size	Article number
WorkBeads affimAb	25mL	40800001
	200mL	40800002
	1L	40800010
BabyBio affimAb 1mL	1mL x 1	45800101
	1mL x 2	45800102
	1mL x 5	45800103
	1mL x 10	45800104
BabyBio affimAb 5mL	5mL x 1	45800105
	5mL x 2	45800106
	5mL x 5	45800107
	5mL x 10	45800108