Ab-Capcher™ and Ab-Capcher ExTra™ Resistance to alkaline washing

Activity measurement

Human serum gamma globulin solution
(40 mg/mL)
↓
Add to affinity gel (spin column)
↓
Shake (1 hour)
↓
Wash (PBS)
↓
Elute with 0.1 M Glycine-HCl (pH 2.8)
(Add 1 M Tris to neutralize)
↓
A280nm measurement

Alkaline washing

Affinity gel carrier (spin column)
↓
3 times: ① Add/wash alkaline solution → ↓ Shake (5 minutes) → ② Equilibrate with binding buffer (PBS)
↓
1 set = ① and ②: repeat 10 sets, 20 sets, 30 sets
↓
Binding activity measurement

Activity measurement result

Number of NaOH washes and antibody binding amount

0.5 N NaOH wash

Ligand immobilized gel	Human IgG binding amount (mg/mL gel)			
	Untreated	10 washes	20 washes	30 washes
Ab-Capcher™	71.1 (100%)	69.5 (97.8%)	61.8 (87.0%)	60.3 (84.8%)
Ab-Capcher ExTra™	94.9 (100%)	90.6 (95.4%)	79.3 (83.6%)	77.4 (81.6%)

1.0 N NaOH wash

Ligand immobilized gel	Human IgG binding amount (mg/mL gel)			
	Untreated	10 washes	20 washes	30 washes
Ab-Capcher™	73.0 (100%)	62.4 (85.5%)	51.7 (70.8%)	42.0 (57.6%)
Ab-Capcher ExTra™	98.3 (100%)	86.7 (88.2%)	69.8 (71.0%)	58.7 (59.7%)

Ab-Capcher™ and Ab-Capcher ExTra™, alkaline-stable Protein A-R28 immobilized on highly cross-linked agarose, have been evaluated as gel carriers that can be washed with alkali. Therefore, alkali washing was performed with a highly alkaline solution to verify alkali resistance. It was found that Ab-Capcher™ and Ab-Capcher ExTra™ retain IgG binding capacity of 80% or more after repeated washing with 0.5N NaOH (30 washes) and 1N NaOH (10 washes).

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