

CLAIMS

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1. An Ig binding protein comprising one or more Ig binding domains, wherein at least one domain comprises or consists of ~~an~~ the amino acid sequence of ~~any one of~~ SEQ ID NO: ~~1, 2, 3, 4, or 5, 6, 7, 8, 9, or 10,~~ or an amino acid sequence with at least ~~95-97%~~ identity to any of SEQ ID NO: ~~1, 2, 3, 4, or 5, 6, 7, 8, 9, or 10.~~

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~~2. The Ig binding protein according to claim 1, wherein said domain comprises the amino acid sequence as set forth in SEQ ID NO: 1 or a sequence at least 95% identical thereto.~~

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~~3. The Ig binding protein according to claim 1, wherein said domain comprises the amino acid sequence as set forth in SEQ ID NO: 7 or a sequence at least 95% identical thereto, or wherein said domain comprises the amino acid sequence as set forth in SEQ ID NO: 10 or a sequence at least 95% identical thereto.~~

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~~4. The Ig binding protein according to claim 3, wherein said domain comprises the amino acid sequence as set forth in SEQ ID NO: 8 or SEQ ID NO: 9.~~

~~25. The Ig binding protein according to any one of claims 1-4, wherein the protein comprises 2, 3, 4, 5, 6, 7, or 8 domains linked to each other.~~

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~~36. The Ig binding protein according to claim 52, wherein the protein is a homo-multimer or a hetero-multimer.~~

~~47. The Ig binding protein according to claim 63, wherein one or more domains are linked to each other directly or with one or more linkers.~~

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~~58. The Ig binding protein according to any one of claims 1-74, wherein said protein binds to IgG₁, IgG₂, IgG₄, IgM, IgA, Ig fragments, Fc fragments, or Fab fragments.~~

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~~69. The Ig binding protein according to any one of claims 1-85, wherein the protein is immobilized to a solid support.~~

~~710. An affinity separation matrix comprising the Ig binding protein according to any one of claims 1-96 coupled to said affinity separation matrix.~~

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~~811. Use of the Ig binding protein according to any one of claims 1-96 or of the affinity separation matrix according to claim 107 for affinity purification of any protein with affinity to the Ig binding protein.~~

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~~912. A method of affinity purification of a protein comprising an Ig sequence, the method comprising:~~

(a) providing a liquid that contains protein comprising an Ig sequence;

(b) providing an affinity separation matrix according to claim ~~107~~;

(c) contacting said affinity separation matrix with the liquid under conditions that permit binding of the at least one Ig binding protein according to any one of

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~~claims 1-96~~ to a protein comprising an Ig sequence; and

(d) eluting said protein comprising an Ig sequence from said affinity purification matrix.

5 | 1013. The method according to claim ~~12-9~~, wherein in step (d) ~~wherein~~ more than 90 % of the protein comprising the Ig sequence is eluted from the Ig binding protein according to any of claims 1-~~96~~. M

10 | 1114. The method according to ~~any of claims 12-139 or 10~~, comprising the additional step of (e) cleaning the affinity purification matrix with an alkaline cleaning liquid.

15 | 1215. The method according to claim ~~1411~~, wherein the Ig-binding capacity of the Ig binding protein is at least 70 % compared to ~~of~~ the Ig binding capacity before the incubation under alkaline conditions.