

**Supplementary Table 3.** Progenesis comparative analysis between the proteins identified onto the CaMg materials with respect to the Ca coatings. Proteins with ANOVA  $p < 0.05$  (yellow) and a ratio higher than 1.5 in either direction were considered as significantly different. Proteins with increased affinity to coatings doped with CaMg in comparison to Ca are marked in red, while those with reduced affinity appear in green.

Accession	Description	Peptides	<i>p</i> value	Ca0.5Mg/Ca	<i>p</i> value	Ca1Mg/Ca	<i>p</i> value	Ca1.5Mg/Ca
HRG_HUMAN	Histidine-rich glycoprotein	5	2,65E-04	4,24	8,25E-06	6,31	1,87E-05	10,64
PIP_HUMAN	Prolactin-inducible protein	2	7,04E-01	1,49	5,94E-01	1,31	2,02E-02	3,34
PLAK_HUMAN	Junction plakoglobin	5	2,85E-01	2,46	3,52E-02	0,38	8,77E-02	3,18
SPB12_HUMAN	Serpin B12	4	5,59E-01	1,49	5,58E-01	1,35	2,47E-02	3,14
G3P_HUMAN	Glyceraldehyde-3-phosphate dehydrogenase	4	4,13E-01	1,60	2,35E-01	1,45	4,39E-03	3,14
PLMN_HUMAN	Plasminogen	12	9,60E-02	1,66	5,57E-02	1,69	3,41E-03	2,30
HBA_HUMAN	Hemoglobin subunit alpha	4	1,88E-01	0,71	3,25E-01	1,31	3,33E-02	1,81
APMAP_HUMAN	Adipocyte plasma membrane-associated protein	2	3,48E-02	0,53	1,83E-01	1,41	3,55E-01	1,67
APOA4_HUMAN	Apolipoprotein A-IV	7	5,47E-01	0,90	3,48E-01	1,21	2,09E-02	1,55
FA12_HUMAN	Coagulation factor XII	2	1,27E-01	2,38	3,21E-02	0,29	3,51E-01	1,48
HV551_HUMAN	Immunoglobulin heavy variable 5-51	2	5,37E-03	0,66	1,44E-01	1,37	9,91E-01	1,00
TGM3_HUMAN	Protein-glutamine gamma-glutamyltransferase E	4	1,19E-02	0,56	1,04E-02	0,60	9,81E-01	0,99
KCRM_HUMAN	Creatine kinase M-type	3	1,12E-01	0,45	3,55E-02	0,23	8,44E-01	0,88
CO8B_HUMAN	Complement component C8 beta chain	3	1,03E-02	0,43	8,84E-01	0,96	1,74E-01	0,78
TSK_HUMAN	Tsukushin	2	7,59E-03	0,28	1,60E-03	0,41	2,99E-01	0,60
BLMH_HUMAN	Bleomycin hydrolase	4	7,53E-01	0,89	6,09E-03	0,47	1,10E-01	0,54
CRP_HUMAN	C-reactive protein	2	1,96E-01	0,60	2,01E-01	0,78	3,38E-03	0,51