

## Mass list

Calculated m/z window
349.5–375.5
374.5–400.5
399.5–412.5
411.5–424.5
423.5–436.5
435.5–448.5
447.5–460.5
459.5–472.5
471.5–484.5
483.5–496.5
495.5–508.5
507.5–520.5
519.5–532.5
531.5–544.5
543.5–556.5
555.5–568.5
567.5–580.5
579.5–592.5
591.5–604.5
603.5–616.5
615.5–628.5
627.5–640.5
639.5–652.5
651.5–664.5
663.5–676.5
675.5–688.5
687.5–700.5
699.5–720.5
719.5–740.5
739.5–760.5
759.5–780.5
779.5–800.5
799.5–820.5
819.5–840.5
839.5–860.5
859.5–880.5
879.5–900.5
899.5–950.5
949.5–1000.5
999.5–1050.5
1049.5–1100.5
1099.5–1150.5
1149.5–1200.5
1199.5–1650.5

Supplementary Table S1

Protein name	Function, with focus on potential associations with thrombosis
Alpha-1-acid glycoprotein 1	Inflammatory reactant that has been shown to activate platelets directly, which in turn can contribute to thrombogenesis <sup>1</sup>
Alpha-1-acid glycoprotein 2	Inflammatory reactant that has been shown to activate platelets directly, which in turn can contribute to thrombogenesis <sup>1</sup>
Alpha-1-antichymotrypsin	No identified association with thrombosis. Inflammatory reactant <sup>2</sup>
Apolipoprotein A-I	Higher levels have in vitro shown to inhibit clot formation and stability as well as platelet activation, i.e., lower levels equal more thrombosis and vice versa <sup>3</sup>
Apolipoprotein E (Apo-E)	Apolipoproteins, including ApoE, have been linked to arterial thrombosis. Yet, association have also been suggested with venous thromboembolism <sup>4</sup>
CD44 antigen	Adhesion molecule expressed, e.g., in endothelial cells, immune cells and platelets. Platelets express higher levels of CD44 when activated, increasing their "stickiness," which has been suggested to increase risk of thrombosis, <sup>5</sup> potentially by modulating effects of tissue factor <sup>6</sup>
CD59 glycoprotein (1F5 antigen)	A potent inhibitor of the complement membrane attack complex, inhibiting complement-mediated hemolysis. Patients with CD59 deficiency suffer from a disease resulting in hemolytic anemia and thrombosis. When expressed CD59 inhibits platelets from complement mediated attack, "protecting" platelets <sup>7</sup>
Golgi membrane protein 1	No identified association with thrombosis. Has been described as a cellular response protein to viral infection <sup>8</sup>
IgGfC-binding protein	Previously described to be upregulated in microparticles from activated platelets in patients with deep venous thrombosis. <sup>9</sup> No known function associated with thrombosis
Insulinlike growth factor-binding protein 2	Has been linked to platelet activation, which in turn can participate in thrombogenic pathways <sup>10</sup>
Intercellular adhesion molecule 1 (ICAM-1)	Endothelial transmembrane glycoprotein shown to be upregulated in inflammation and thrombosis, with a predilection for pulmonary vasculature. Suggested to be associated with thrombogenic pathways in endothelial injury, COVID-19, in antiphospholipid syndrome and suggested as a drug therapy target to direct antithrombotic therapy <sup>11-13</sup>
Leukocyte Ig-like receptor subfamily A member 3	No identified association with thrombosis. Acts as soluble receptor for class I MHC antigens. Binds with high affinity to the surface of monocytes, leading to abolished LPS-induced TNF-alpha production by monocytes <sup>8</sup>
Low-affinity Ig gamma Fc region receptor III-A	Its importance in heparin-induced thrombocytopenia, a prothrombotic adverse drug effect, has been well documented. In addition, it has been proposed to be involved in severe dengue infections <sup>14,15</sup>
Macrophage mannose receptor 1	Has a role in macrophage endocytosis as well as antigen processing and presentation. Have previously been shown to be associated with uptake, and potentially presentation, of ADAMST13 as well as associated with thrombotic thrombocytopenic purpura <sup>16</sup>
Neutrophil defensin 1	Neutrophil alpha defensins have been shown in vitro to accelerate fibrin polymerization, to increase fiber density and branching, to incorporate into nascent fibrin clots, and to impede fibrinolysis. Once activated by the intrinsic pathway (through exposed endothelial collagen), neutrophils excrete neutrophil extracellular traps containing, for instance, alpha defensins, which have been shown to be a potential link between innate immunity and thrombosis <sup>17-19</sup>
Oncoprotein-induced transcript 3 protein	No identified association with thrombosis. May be involved in hepatocellular function and development <sup>8</sup>
Phosphatidylinositol-glycan-specific phospholipase D	No identified association with thrombosis. Hydrolyzes the inositol-phosphate linkage in proteins anchored by phosphatidylinositol glycans (GPI-anchor), releasing these proteins from the membrane <sup>8</sup>
Plastin-2	Actin-binding protein. Suggested to be a negative regulator of megakaryocyte platelet production, meaning high levels could cause thrombocytopenia <sup>20,21</sup>
Polymeric Ig receptor	No identified association with thrombosis. On its own (free form), it can act as a nonspecific microbial scavenger to prevent pathogen interaction with epithelial cells. When bound mediates selective transcytosis of polymeric IgA and IgM across mucosal epithelial cells. Previously shown to be elevated in released microparticles in patients with deep venous thrombosis <sup>8</sup>
Trans-Golgi network integral membrane protein 2	Involved in regulating membrane traffic to and from trans-Golgi network. Have been identified in activated platelets by mass spectrometry, at low levels, and suggested to be one of several potential "switch" candidates in platelet activation <sup>22</sup>

## References

- 1 Fiedel BA, Costello M, Gewurz H, Hussissian E. Effects of heparin and  $\alpha$  1-acid glycoprotein on thrombin or activated thromboplastin reagent-induced platelet aggregation and clot formation. *Haemostasis* 1983;13(02):89–95
- 2 Jin Y, Wang W, Wang Q, et al. Alpha-1-antichymotrypsin as a novel biomarker for diagnosis, prognosis, and therapy prediction in human diseases. *Cancer Cell Int* 2022;22(01):156
- 3 Jones WL, Ramos CR, Banerjee A, et al. Apolipoprotein A-I, elevated in trauma patients, inhibits platelet activation and decreases clot strength. *Platelets* 2022;33(08):1119–1131
- 4 Orsi FA, Lijfering WM, Van der Laarse A, et al. Association of apolipoproteins C-I, C-II, C-III and E with coagulation markers and venous thromboembolism risk. *Clin Epidemiol* 2019;11:625–633
- 5 Štok U, Blokar E, Lenassi M, et al. Characterization of plasma-derived small extracellular vesicles indicates ongoing endothelial and platelet activation in patients with thrombotic antiphospholipid syndrome. *Cells* 2020;9(05):1211
- 6 Villard AV, Genna A, Lambert J, et al. Regulation of tissue factor by CD44 supports coagulant activity in breast tumor cells. *Cancers (Basel)* 2022;14(13):3288
- 7 Rawish E, Sauter M, Sauter R, Nording H, Langer HF. Complement, inflammation and thrombosis. *Br J Pharmacol* 2021;178(14):2892–2904
- 8 UniProt Consortium. UniProt: the universal protein knowledge-base in 2023. *Nucleic Acids Res* 2023;51(D1):D523–D531
- 9 Ramacciotti E, Hawley AE, Wroblewski SK, et al. Proteomics of microparticles after deep venous thrombosis. *Thromb Res* 2010;125(06):e269–e274
- 10 Haschemi R, Kobelt D, Steinwarz E, Schlesinger M, Stein U, Bendas G. Insulin-like growth factor binding protein-2 (IGFBP2) is a key molecule in the MACC1-mediated platelet communication and metastasis of colorectal cancer cells. *Int J Mol Sci* 2021;22(22):12195
- 11 Isogai N, Tanaka H, Asamura S. Thrombosis and altered expression of intercellular adhesion molecule-1 (ICAM-1) after avulsion injury in rat vessels. *J Hand Surg [Br]* 2004;29(03):230–234
- 12 Pierangeli SS, Espinola RG, Liu X, Harris EN. Thrombogenic effects of antiphospholipid antibodies are mediated by intercellular cell adhesion molecule-1, vascular cell adhesion molecule-1, and P-selectin. *Circ Res* 2001;88(02):245–25
- 13 Nagashima S, Mendes MC, Camargo Martins AP, et al. Endothelial dysfunction and thrombosis in patients with COVID-19: brief report. *Arterioscler Thromb Vasc Biol* 2020;40(10):2404–2407
- 14 Wang TT, Sewatanon J, Memoli MJ, et al. IgG antibodies to dengue enhanced for Fc $\gamma$ R11A binding determine disease severity. *Science* 2017;355(6323):395–398
- 15 Marchetti M, Zermatten MG, Bertaggia Calderara D, Aliotta A, Alberio L. Heparin-induced thrombocytopenia: a review of new concepts in pathogenesis, diagnosis, and management. *J Clin Med* 2021;10(04):683
- 16 Sorvillo N, Pos W, van den Berg LM, et al. The macrophage mannose receptor promotes uptake of ADAMTS13 by dendritic cells. *Blood* 2012;119(16):3828–3835
- 17 Healy LD, McCarty OJT. Contact system sends defensins to the rescue. *Blood* 2019;133(05):385–386
- 18 Abu-Fanne R, Stepanova V, Litvinov RI, et al. Neutrophil  $\alpha$ -defensins promote thrombosis in vivo by altering fibrin formation, structure, and stability. *Blood* 2019;133(05):481–493
- 19 Shi Y, Gauer JS, Baker SR, Philippou H, Connell SD, Ariens RAS. Neutrophils can promote clotting via FXI and impact clot structure via neutrophil extracellular traps in a distinctive manner in vitro. *Sci Rep* 2021;11(01):1718
- 20 Guo L, Bhatlekar S, Jacob SP, et al. Actin bundling protein L-plastin regulates megakaryocyte membrane rigidity and platelet spreading. *Blood* 2022;140(Suppl 1):5510–5511
- 21 Mbiandjeu S, Balduini A, Malara A. megakaryocyte cytoskeletal proteins in platelet biogenesis and diseases. *Thromb Haemost* 2022;122(05):666–678
- 22 Lemmens TP, Coenen DM, Swieringa F, et al. Finding the “switch” in platelet activation: prediction of key mediators involved in reversal of platelet activation using a novel network biology approach. *J Proteomics* 2022;261:104577