

What is claimed is:

1. A method of treating a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD), comprising administering to the human subject a therapy comprising a JAK inhibitor, wherein the human subject has
 - 5 been previously determined to have (i) a baseline concentration of at least one protein selected from the group consisting of IL8, HAOX1, ENPP7, ACE2, SULT2A1, MCP-3, CES1, MFGE8, PLXNB1, TNFRSF10A, CCL15, SEMA4C, PREB, NFATC3, CCL19, DLL1, ENTPD2, IL-4RA, EPHA2, FOSB, CXCL10, VAMP5, ALDH3A1, MVK, IL12RB1, CALCA, AHCY, PRSS2, LILRB4, DDAH1, IL-1ra, NECTIN2, PDCD1,
 - 10 CD74, PD-L1, REG3A, CA5A, N2DL-2, CDCP1, U-PAR, SIGLEC7, ANGPTL4, ALDH1A1, SPINK1, HTRA2, PRDX6, IL-1RT2, IGFBP-1, HNMT, TRAIL-R2, CXADR, CTSL1, IFN-gamma-R1, IL-18R1, KRT19, KYNU, and TGM2 in a biological sample obtained from the human subject that is lower than a control, and/or
 - (ii) a baseline concentration of at least one protein selected from the group consisting of
 - 15 PON3, CNTN1, IGFBP3, LEP, Notch 3, TN-R, HSD11B1, FAM19A5, NCAN, F11, GDF-8, CCL28, GALNT10, BCAN, TIMP4, CRISP2, CD207, WNT9A, MBL2, EN-RAGE, TWEAK, CR2, MFAP5, KIT, GH, PFKM, CDSN, CRH, GCP5, KLK6, and DRAXIN in a biological sample obtained from the human subject that is higher than a control.

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2. The method of claim 1, wherein the human subject has been previously determined to have (i) a baseline concentration of at least one protein selected from the group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, ALDH1A1,

CES1, REG3A, KYNU, IL-4RA, CDCP1, MVK, FOSB, NFATC3, N2DL-2, DDAH1, IGFBP-1, ALDH3A1, CXADR, PLXNB1, CD74, ENTPD2, PREB, CCL19, HNMT, HTRA2, IL-1RT2, and IL-18R1 in a biological sample obtained from the human subject that is lower than a control, and/or (ii) a baseline concentration of at least one protein
5 selected from the group consisting of PON3, LEP, MBL2, GH, GDF-8, EN-RAGE, CRISP2, and CR2 in a biological sample obtained from the human subject that is higher than a control.

3. The method of claim 1, wherein the human subject has been previously
10 determined to have (i) a baseline concentration of at least one protein selected from the group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, and ALDH1A1 in a biological sample obtained from the human subject that is lower than a control, and/or (ii) a baseline concentration of at least one protein selected from the group
15 consisting of PON3, LEP, and MBL2 in a biological sample obtained from the human subject that is higher than a control.

4. The method of claim 1, wherein the human subject has been previously determined to have (i) a baseline concentration of at least one protein selected from the
20 group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, and SPINK1 in a biological sample obtained from the human subject that is lower than a control, and/or (ii) a baseline concentration of at least one protein selected from the group consisting of PON3 and LEP in a biological sample obtained from the human subject that is higher than a control.

5. A method of treating a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD), comprising:

providing a biological sample obtained from the human subject;

measuring in the biological sample a reduced concentration, as compared to a control, of at least one protein selected from the group consisting of IL8, HAOX1, ENPP7, ACE2, SULT2A1, MCP-3, CES1, MFGE8, PLXNB1, TNFRSF10A, CCL15, SEMA4C, PREB, NFATC3, CCL19, DLL1, ENTPD2, IL-4RA, EPHA2, FOSB, CXCL10, VAMP5, ALDH3A1, MVK, IL12RB1, CALCA, AHCY, PRSS2, LILRB4, DDAH1, IL-1ra, NECTIN2, PDCD1, CD74, PD-L1, REG3A, CA5A, N2DL-2, CDCP1, U-PAR, SIGLEC7, ANGPTL4, ALDH1A1, SPINK1, HTRA2, PRDX6, IL-1RT2, IGFBP-1, HNMT, TRAIL-R2, CXADR, CTSL1, IFN-gamma-R1, IL-18R1, KRT19, KYNU, and TGM2, and/or an increased concentration, as compared to a control, of at least one protein selected from the group consisting of PON3, CNTN1, IGFBP3, LEP, Notch 3, TN-R, HSD11B1, FAM19A5, NCAN, F11, GDF-8, CCL28, GALNT10, BCAN, TIMP4, CRISP2, CD207, WNT9A, MBL2, EN-RAGE, TWEAK, CR2, MFAP5, KIT, GH, PFKM, CDSN, CRH, GCP5, KLK6, and DRAXIN; and administering a therapy comprising a JAK inhibitor to the human subject.

6. The method of claim 5, comprising:

measuring in the biological sample a reduced concentration, as compared to a control, of at least one protein selected from the group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, ALDH1A1, CES1, REG3A, KYNU, IL-4RA, CDCP1, MVK, FOSB, NFATC3, N2DL-2, DDAH1, IGFBP-1, ALDH3A1, CXADR, PLXNB1,

CD74, ENTPD2, PREB, CCL19, HNMT, HTRA2, IL-1RT2, and IL-18R1, and/or an increased concentration, as compared to a control, of at least one protein selected from the group consisting of PON3, LEP, MBL2, GH, GDF-8, EN-RAGE, CRISP2, and CR2; and

5 administering the therapy comprising the JAK inhibitor to the human subject.

7. The method of claim 5, comprising:

measuring in the biological sample a reduced concentration, as compared to a control, of at least one protein selected from the group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, and ALDH1A1, and/or an increased concentration, as compared to a control, of at least one protein selected from the group consisting of PON3, LEP, and MBL2; and

15 administering the therapy comprising the JAK inhibitor to the human subject.

8. The method of claim 5, comprising:

measuring in the biological sample a reduced concentration, as compared to a control, of at least one protein selected from the group consisting of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, and SPINK1, and/or an increased concentration, as compared to a control, of at least one protein selected from the group consisting of PON3 and LEP; and

20 administering the therapy comprising the JAK inhibitor to the human subject.

9. The method of any one of claims 1 or 8, wherein a second therapeutic agent is administered to the human subject in combination with the JAK inhibitor.

10. The method of claim 9, wherein the second therapeutic agent is a
5 corticosteroid, methotrexate, cyclosporine, mycophenolate mofetil, tacrolimus, sirolimus, everolimus, antithymocyte globulin, alemtuzumab, cyclophosphamide, ibrutinib, imatinib, infliximab, etanercept, tocilizumab, alemtuzumab, basiliximab, daclizumab, rituximab, denileukin diftitox, pentostatin, ciclosporin, thalidomide, halofuginone, hydroxychloroquine, or mesenchymal stem cells.

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11. The method of claim 9, wherein the second therapeutic agent is a corticosteroid.

12. The method of claim 11, wherein the corticosteroid is methylprednisolone
15 or prednisone.

13. A method of predicting the response of a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD) to a therapy comprising a JAK inhibitor, comprising:

20 providing a biological sample obtained from the subject before the therapy comprising the JAK inhibitor; and

measuring the concentration of at least one protein selected from the group consisting of PON3, CNTN1, IGFBP3, LEP, Notch 3, TN-R, HSD11B1, FAM19A5, NCAN, F11, GDF-8, CCL28, GALNT10, BCAN, TIMP4, CRISP2, CD207, WNT9A,

MBL2, EN-RAGE, TWEAK, CR2, MFAP5, KIT, GH, PFKM, CDSN, CRH, GCP5,
 KLK6, DRAXIN, IL8, HAOX1, ENPP7, ACE2, SULT2A1, MCP-3, CES1, MFGE8,
 PLXNB1, TNFRSF10A, CCL15, SEMA4C, PREB, NFATC3, CCL19, DLL1,
 ENTPD2, IL-4RA, EPHA2, FOSB, CXCL10, VAMP5, ALDH3A1, MVK, IL12RB1,
 5 CALCA, AHCY, PRSS2, LILRB4, DDAH1, IL-1ra, NECTIN2, PDCD1, CD74, PD-L1,
 REG3A, CA5A, N2DL-2, CDCP1, U-PAR, SIGLEC7, ANGPTL4, ALDH1A1,
 SPINK1, HTRA2, PRDX6, IL-1RT2, IGFBP-1, HNMT, TRAIL-R2, CXADR, CTSL1,
 IFN-gamma-R1, IL-18R1, KRT19, KYNU, and TGM2 in the biological sample,
 wherein a reduced concentration, as compared to a control, of at least one of
 10 IL8, HAOX1, ENPP7, ACE2, SULT2A1, MCP-3, CES1, MFGE8, PLXNB1,
 TNFRSF10A, CCL15, SEMA4C, PREB, NFATC3, CCL19, DLL1, ENTPD2, IL-4RA,
 EPHA2, FOSB, CXCL10, VAMP5, ALDH3A1, MVK, IL12RB1, CALCA, AHCY,
 PRSS2, LILRB4, DDAH1, IL-1ra, NECTIN2, PDCD1, CD74, PD-L1, REG3A, CA5A,
 N2DL-2, CDCP1, U-PAR, SIGLEC7, ANGPTL4, ALDH1A1, SPINK1, HTRA2,
 15 PRDX6, IL-1RT2, IGFBP-1, HNMT, TRAIL-R2, CXADR, CTSL1, IFN-gamma-R1,
 IL-18R1, KRT19, KYNU, or TGM2, and/or an increased concentration, as compared to
 a control, of at least one of PON3, CNTN1, IGFBP3, LEP, Notch 3, TN-R, HSD11B1,
 FAM19A5, NCAN, F11, GDF-8, CCL28, GALNT10, BCAN, TIMP4, CRISP2, CD207,
 WNT9A, MBL2, EN-RAGE, TWEAK, CR2, MFAP5, KIT, GH, PFKM, CDSN, CRH,
 20 GCP5, KLK6, or DRAXIN is predictive that the subject will respond to the therapy
 comprising the JAK inhibitor.

14. The method of claim 13, comprising:

measuring the concentration of at least one protein selected from the group consisting of PON3, LEP, MBL2, GH, GDF-8, EN-RAGE, CRISP2, CR2, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1,
5 PRSS2, CXCL10, MFGE8, KRT19, ALDH1A1, CES1, REG3A, KYNU, IL-4RA, CDCP1, MVK, FOSB, NFATC3, N2DL-2, DDAH1, IGFBP-1, ALDH3A1, CXADR, PLXNB1, CD74, ENTPD2, PREB, CCL19, HNMT, HTRA2, IL-1RT2, and IL-18R1 in the biological sample,

wherein a reduced concentration, as compared to a control, of at least one of
10 MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, ALDH1A1, CES1, REG3A, KYNU, IL-4RA, CDCP1, MVK, FOSB, NFATC3, N2DL-2, DDAH1, IGFBP-1, ALDH3A1, CXADR, PLXNB1, CD74, ENTPD2, PREB, CCL19, HNMT, HTRA2, IL-1RT2, or IL-18R1, and/or an increased concentration, as compared to a control, of at least one of
15 PON3, LEP, MBL2, GH, GDF-8, EN-RAGE, CRISP2, or CR2 is predictive that the subject will respond to the therapy comprising the JAK inhibitor.

15. The method of claim 13, comprising:

measuring the concentration of at least one protein selected from the group
20 consisting of PON3, LEP, MBL2, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, and ALDH1A1 in the biological sample,

wherein a reduced concentration, as compared to a control, of at least one of MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2,

CTSL1, PRSS2, CXCL10, MFGE8, KRT19, or ALDH1A1, and/or an increased concentration, as compared to a control, of at least one of PON3, LEP, or MBL2 is predictive that the subject will respond to the therapy comprising the JAK inhibitor.

- 5 16. The method of claim 13, comprising:
- measuring the concentration of at least one protein selected from the group consisting of PON3, LEP, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, and SPINK1 in the biological sample,
- wherein a reduced concentration, as compared to a control, of at least one of
- 10 MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, or SPINK1, and/or an increased concentration, as compared to a control, of at least one of PON3 or LEP is predictive that the subject will respond to the therapy comprising the JAK inhibitor.

17. The method of any one of the preceding claims, wherein the control is a
- 15 pre-established cut-off value.

18. The method of any one of claims 1 to 17, wherein the control is the concentration of the protein in a sample or samples obtained from one or more subjects that have not responded to treatment with the JAK inhibitor.

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19. A method for measuring the amount of a protein in a sample, comprising:
- providing a biological sample obtained from a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD); and
- measuring the concentration of at least one protein selected from the group

consisting of PON3, CNTN1, IGFBP3, LEP, Notch 3, TN-R, HSD11B1, FAM19A5, NCAN, F11, GDF-8, CCL28, GALNT10, BCAN, TIMP4, CRISP2, CD207, WNT9A, MBL2, EN-RAGE, TWEAK, CR2, MFAP5, KIT, GH, PFKM, CDSN, CRH, GCP5, KLK6, DRAXIN, IL8, HAOX1, ENPP7, ACE2, SULT2A1, MCP-3, CES1, MFGE8, 5 PLXNB1, TNFRSF10A, CCL15, SEMA4C, PREB, NFATC3, CCL19, DLL1, ENTPD2, IL-4RA, EPHA2, FOSB, CXCL10, VAMP5, ALDH3A1, MVK, IL12RB1, CALCA, AHCY, PRSS2, LILRB4, DDAH1, IL-1ra, NECTIN2, PDCD1, CD74, PD-L1, REG3A, CA5A, N2DL-2, CDCP1, U-PAR, SIGLEC7, ANGPTL4, ALDH1A1, SPINK1, HTRA2, PRDX6, IL-1RT2, IGFBP-1, HNMT, TRAIL-R2, CXADR, CTSL1, 10 IFN-gamma-R1, IL-18R1, KRT19, KYNU, and TGM2 in the biological sample.

20. The method of claim 19, comprising measuring the concentration of at least one protein selected from the group consisting of PON3, LEP, MBL2, GH, GDF-8, EN-RAGE, CRISP2, CR2, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, 15 SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, ALDH1A1, CES1, REG3A, KYNU, IL-4RA, CDCP1, MVK, FOSB, NFATC3, N2DL-2, DDAH1, IGFBP-1, ALDH3A1, CXADR, PLXNB1, CD74, ENTPD2, PREB, CCL19, HNMT, HTRA2, IL-1RT2, and IL-18R1 in the biological sample.

20 21. The method of claim 19, comprising measuring the concentration of at least one protein selected from the group consisting of PON3, LEP, MBL2, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, SPINK1, ENPP7, ACE2, CTSL1, PRSS2, CXCL10, MFGE8, KRT19, and ALDH1A1 in the biological sample.

22. The method of claim 19, comprising measuring the concentration of at least one protein selected from the group consisting of PON3, LEP, MCP-3, HAOX1, CA5A, CALCA, IL8, SULT2A1, VAMP5, and SPINK1 in the biological sample.

5 23. The method of any one of claims 19 to 22, wherein the concentrations of no more than 20 proteins are measured.

24. The method of any one of claims 19 to 22, wherein the concentrations of no more than 10 proteins are measured.

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25. A method of treating a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD), comprising:

measuring, in a first biological sample obtained from the human subject prior to administering a therapy comprising a JAK inhibitor, the concentration of at least one
15 protein selected from the group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1,
20 PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR,

STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b,
 GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1,
 CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-
 5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A,
 5 gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT,
 RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1,
 AREG, SDC4, DCTN2, BID, RELT, CLEC5A, APEX1, PSP-D, FGR, SELE, SELL,
 MESDC2, IQGAP2, CRTAM, LILRB2, TANK, CPXM1, ARSB, SLAMF1, PEBP1,
 STIP1, PDGF subunit B, SCARF1, DEFA1, EPHB4, ARHGAP1, CLM-1, DAB2, LYN,
 10 CASP-8, APBB1IP, ANXA11, ICAM1, PRKCQ, VCAM1, HDGF, CD2AP,
 TNFRSF6B, CLEC1A, TNFRSF14, TACC3, MMP-1, NRP1, ZBTB17, NADK,
 PLXNA4, MMP-9, NCR1, AMIGO2, FES, CD79B, TNXB, TXNDC5, TRANCE,
 ARG1, PCDH17, LRMP, C1QTNF1, CLM-6, CKAP4, APP, PGLYRP1, LILRA5,
 CLEC10A, NMNAT1, IL-6RA, ATG4A, TIMP1, COCH, DKN1A, CD1C, DECR1,
 15 DAG1, IGFBP-2, RET, GSAP, PILRB, CLEC6A, PECAM-1, PXN, ADGRG1, DPP7,
 TDRKH, Siglec-9, CD40-L, VEGFC, LYVE1, FADD, FCRL1, EGF, HGF, GZMH,
 CLEC4G, LY75, PRDX3, COL4A1, CEACAM8, SEMA7A, NUDT5, FCRL6, PAPP,
 FASLG, GRN, MATN3, TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3,
 CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL,
 20 CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1,
 CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1,
 NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP,
 CPA2, Ep-CAM, THBS2, GPNMB, ITGB5, GT, APLP1, TACSTD2, NINJ1, REN,
 GCG, SERPINA9, KAZALD1, SERPINA12, PODXL, AMN, IGF1R, LTBP2,

ANGPTL3, SCARA5, B4GAT1, ROBO2, PDGFC, CA12, DDC, EDIL3, XPNPEP2,
 PRTG, NQO2, AMBP, ERBB2, IL6, MCP-1, VEGFD, GDF-2, MUC-16, KLK10,
 FAM3C, uPA, AGR2, METRNL, RTN4R, IGF2R, NTRK2, ITGB6, SCARF2,
 SCGB3A2, RGMB, EZR, PROC, FURIN, PIgR, and SMOC2;

- 5 administering the therapy comprising the JAK inhibitor to the human subject;
 and
 measuring, in a second biological sample obtained from the human subject
 after administering the therapy comprising the JAK inhibitor, a reduced concentration,
 as compared to the first biological sample, of at least one protein selected from the
 10 group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5,
 DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha,
 CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR,
 LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP,
 ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA,
 15 FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84,
 STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244,
 HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2,
 PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP,
 MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2,
 20 FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-
 R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA,
 IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP,
 SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4,
 CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1,

- CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, RELT, CLEC5A, APEX1, PSP-D, FGR, SELE, SELL, MESDC2, IQGAP2, CRTAM, LILRB2, TANK, CPXM1, ARSB, SLAMF1, PEBP1, STIP1, PDGF subunit B, SCARF1, DEFA1, EPHB4, ARHGAP1, CLM-1, DAB2, LYN, CASP-8, APBB1IP, ANXA11,
- 5 ICAM1, PRKCQ, VCAM1, HDGF, CD2AP, TNFRSF6B, CLEC1A, TNFRSF14, TACC3, MMP-1, NRP1, ZBTB17, NADK, PLXNA4, MMP-9, NCR1, AMIGO2, FES, CD79B, TNXB, TXNDC5, TRANCE, ARG1, PCDH17, LRMP, C1QTNF1, CLM-6, CKAP4, APP, PGLYRP1, LILRA5, CLEC10A, NMNAT1, IL-6RA, ATG4A, TIMP1, COCH, DKN1A, CD1C, DECR1, DAG1, IGFBP-2, RET, GSAP, PILRB, CLEC6A,
- 10 PECAM-1, PXN, ADGRG1, DPP7, TDRKH, Siglec-9, CD40-L, VEGFC, LYVE1, FADD, FCRL1, EGF, HGF, GZMH, CLEC4G, LY75, PRDX3, COL4A1, CEACAM8, SEMA7A, NUDT5, FCRL6, PAPP, FASLG, GRN, and MATN3, and/or an increased concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3,
- 15 CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNBP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, ITGB5, GT, APLP1, TACSTD2, NINJ1, REN,
- 20 GCG, SERPINA9, KAZALD1, SERPINA12, PODXL, AMN, IGF1R, LTBP2, ANGPTL3, SCARA5, B4GAT1, ROBO2, PDGFC, CA12, DDC, EDIL3, XPNPEP2, PRTG, NQO2, AMBP, ERBB2, IL6, MCP-1, VEGFD, GDF-2, MUC-16, KLK10, FAM3C, uPA, AGR2, METRNL, RTN4R, IGF2R, NTRK2, ITGB6, SCARF2, SCGB3A2, RGMB, EZR, PROC, FURIN, PIgR, and SMOC2.

26. The method of claim 25, comprising:

- measuring, in the first biological sample obtained from the human subject prior to administering the therapy comprising the JAK inhibitor, the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B,
- 5 MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, INPPL1, LAT2,
- 10 CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93,
- 15 FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b,
- 20 GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1,

AREG, SDC4, DCTN2, BID, and RELT;

administering the therapy comprising the JAK inhibitor to the human subject;

and

measuring, in the second biological sample obtained from the human subject

- 5 after administering the therapy comprising the JAK inhibitor, a reduced concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR,
- 10 LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2,
- 15 PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP,
- 20 SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, and RELT, and/or an increased concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B,

MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11,
 5 SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, and GPNMB.

27. The method of claim 25, comprising:

measuring, in the first biological sample obtained from the human subject prior to administering the therapy comprising the JAK inhibitor, the concentration of at least
 10 one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1,
 15 PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, and HAVCR2;

administering the therapy comprising the JAK inhibitor to the human subject;
 and

20 measuring, in the second biological sample obtained from the human subject after administering the therapy comprising the JAK inhibitor, a reduced concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha,

CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, and HAVCR2,
5 and/or an increased concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, and KIM1.

28. The method of claim 25, comprising:
10 measuring, in the first biological sample obtained from the human subject prior to administering the therapy comprising the JAK inhibitor, the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3,
15 GM-CSF-R-alpha, and CNTNAP2;
administering the therapy comprising the JAK inhibitor to the human subject;
and
measuring, in the second biological sample obtained from the human subject after administering the therapy comprising the JAK inhibitor, a reduced concentration,
20 as compared to the first biological sample, of at least one protein selected from the group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, and CNTNAP2, and/or an increased concentration, as compared to the first biological sample, of at least one protein selected from the group consisting of TMPRSS15,

CCL11, FAM3B, MMP7, NCAM1, Gal-3, and CCL25.

29. The method of claim 25, comprising:

measuring, in the first biological sample obtained from the human subject prior
5 to administering the therapy comprising the JAK inhibitor, the concentration of at least
one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B,
MMP7, NCAM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5,
DNAJB1, CCL17, and ITGB2;

administering the therapy comprising the JAK inhibitor to the human subject;
10 and

measuring, in the second biological sample obtained from the human subject
after administering the therapy comprising the JAK inhibitor, a reduced concentration,
as compared to the first biological sample, of at least one protein selected from the
group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5,
15 DNAJB1, CCL17, and ITGB2, and/or an increased concentration, as compared to the
first biological sample, of at least one protein selected from the group consisting of
TMPRSS15, CCL11, FAM3B, MMP7, and NCAM1.

30. The method of any one of claims 25 to 29, wherein a second therapeutic
20 agent is administered to the human subject in combination with the JAK inhibitor.

31. The method of claim 30, wherein the second therapeutic agent is a
corticosteroid, methotrexate, cyclosporine, mycophenolate mofetil, tacrolimus,
sirolimus, everolimus, antithymocyte globulin, alemtuzumab, cyclophosphamide,

ibrutinib, imatinib, infliximab, etanercept, tocilizumab, alemtuzumab, basiliximab, daclizumab, rituximab, denileukin diftitox, pentostatin, ciclosporin, thalidomide, halofuginone, hydroxychloroquine, or mesenchymal stem cells.

5 32. The method of claim 30, wherein the second therapeutic agent is a corticosteroid.

33. The method of claim 32, wherein the corticosteroid is methylprednisolone or prednisone.

10

34. A method of identifying a therapeutic response of a human subject having, suspected of having, or at risk of developing Graft-Versus-Host Disease (GvHD) to a therapy comprising a JAK inhibitor, comprising:

providing a first biological sample obtained from the human subject before
15 administering the therapy comprising the JAK inhibitor;
measuring the concentration of at least one protein selected from the group consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR,
20 LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2,

- PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP,
MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2,
FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-
R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA,
5 IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP,
SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4,
CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1,
CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, RELT,
CLEC5A, APEX1, PSP-D, FGR, SELE, SELL, MESDC2, IQGAP2, CRTAM, LILRB2,
10 TANK, CPXM1, ARSB, SLAMF1, PEBP1, STIP1, PDGF subunit B, SCARF1,
DEFA1, EPHB4, ARHGAP1, CLM-1, DAB2, LYN, CASP-8, APBB1IP, ANXA11,
ICAM1, PRKCQ, VCAM1, HDGF, CD2AP, TNFRSF6B, CLEC1A, TNFRSF14,
TACC3, MMP-1, NR1P1, ZBTB17, NADK, PLXNA4, MMP-9, NCR1, AMIGO2, FES,
CD79B, TNXB, TXNDC5, TRANCE, ARG1, PCDH17, LRMP, C1QTNF1, CLM-6,
15 CKAP4, APP, PGLYRP1, LILRA5, CLEC10A, NMNAT1, IL-6RA, ATG4A, TIMP1,
COCH, DKN1A, CD1C, DECR1, DAG1, IGFBP-2, RET, GSAP, PILRB, CLEC6A,
PECAM-1, PXN, ADGRG1, DPP7, TDRKH, Siglec-9, CD40-L, VEGFC, LYVE1,
FADD, FCRL1, EGF, HGF, GZMH, CLEC4G, LY75, PRDX3, COL4A1, CEACAM8,
SEMA7A, NUDT5, FCRL6, PAPP, FASLG, GRN, MATN3, TMPRSS15, CCL11,
20 FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2,
Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1,
CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5,
SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11,
SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, ITGB5, GT, APLP1,

TACSTD2, NINJ1, REN, GCG, SERPINA9, KAZALD1, SERPINA12, PODXL, AMN, IGF1R, LTBP2, ANGPTL3, SCARA5, B4GAT1, ROBO2, PDGFC, CA12, DDC, EDIL3, XPNPEP2, PRTG, NQO2, AMBP, ERBB2, IL6, MCP-1, VEGFD, GDF-2, MUC-16, KLK10, FAM3C, uPA, AGR2, METRNL, RTN4R, IGF2R, NTRK2, ITGB6,

5 SCARF2, SCGB3A2, RGMB, EZR, PROC, FURIN, PIgR, and SMOC2 in the first biological sample;

providing a second biological sample obtained from the subject after administering the therapy comprising the JAK inhibitor; and

measuring the concentration of at least one protein selected from the group

10 consisting of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA,

15 FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2,

20 FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1,

- CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, RELT, CLEC5A, APEX1, PSP-D, FGR, SELE, SELL, MESDC2, IQGAP2, CRTAM, LILRB2, TANK, CPXM1, ARSB, SLAMF1, PEBP1, STIP1, PDGF subunit B, SCARF1, DEFA1, EPHB4, ARHGAP1, CLM-1, DAB2, LYN, CASP-8, APBB1IP, ANXA11,
- 5 ICAM1, PRKCQ, VCAM1, HDGF, CD2AP, TNFRSF6B, CLEC1A, TNFRSF14, TACC3, MMP-1, NRP1, ZBTB17, NADK, PLXNA4, MMP-9, NCR1, AMIGO2, FES, CD79B, TNXB, TXNDC5, TRANCE, ARG1, PCDH17, LRMP, C1QTNF1, CLM-6, CKAP4, APP, PGLYRP1, LILRA5, CLEC10A, NMNAT1, IL-6RA, ATG4A, TIMP1, COCH, DKN1A, CD1C, DECR1, DAG1, IGFBP-2, RET, GSAP, PILRB, CLEC6A,
- 10 PECAM-1, PXN, ADGRG1, DPP7, TDRKH, Siglec-9, CD40-L, VEGFC, LYVE1, FADD, FCRL1, EGF, HGF, GZMH, CLEC4G, LY75, PRDX3, COL4A1, CEACAM8, SEMA7A, NUDT5, FCRL6, PAPPA, FASLG, GRN, MATN3, TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1,
- 15 CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, ITGB5, GT, APLP1, TACSTD2, NINJ1, REN, GCG, SERPINA9, KAZALD1, SERPINA12, PODXL, AMN, IGF1R, LTBP2, ANGPTL3, SCARA5, B4GAT1, ROBO2, PDGFC, CA12, DDC,
- 20 EDIL3, XPNPEP2, PRTG, NQO2, AMBP, ERBB2, IL6, MCP-1, VEGFD, GDF-2, MUC-16, KLK10, FAM3C, uPA, AGR2, METRNL, RTN4R, IGF2R, NTRK2, ITGB6, SCARF2, SCGB3A2, RGMB, EZR, PROC, FURIN, PIgR, and SMOC2 in the second biological sample,

wherein a reduced concentration in the second biological sample, as compared to the first biological sample, of at least one of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, RELT, CLEC5A, APEX1, PSP-D, FGR, SELE, SELL, MESDC2, IQGAP2, CRTAM, LILRB2, TANK, CPXM1, ARSB, SLAMF1, PEBP1, STIP1, PDGF subunit B, SCARF1, DEFA1, EPHB4, ARHGAP1, CLM-1, DAB2, LYN, CASP-8, APBB1IP, ANXA11, ICAM1, PRKCQ, VCAM1, HDGF, CD2AP, TNFRSF6B, CLEC1A, TNFRSF14, TACC3, MMP-1, NRP1, ZBTB17, NADK, PLXNA4, MMP-9, NCR1, AMIGO2, FES, CD79B, TNXB, TXNDC5, TRANCE, ARG1, PCDH17, LRMP, C1QTNF1, CLM-6, CKAP4, APP, PGLYRP1, LILRA5,

CLEC10A, NMNAT1, IL-6RA, ATG4A, TIMP1, COCH, DKN1A, CD1C, DECR1, DAG1, IGFBP-2, RET, GSAP, PILRB, CLEC6A, PECAM-1, PXN, ADGRG1, DPP7, TDRKH, Siglec-9, CD40-L, VEGFC, LYVE1, FADD, FCRL1, EGF, HGF, GZMH, CLEC4G, LY75, PRDX3, COL4A1, CEACAM8, SEMA7A, NUDT5, FCRL6, PAPPA, 5 FASLG, GRN, and/or MATN3, and/or an increased concentration in the second biological sample, as compared to the first biological sample, of at least one of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, 10 FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, ITGB5, GT, APLP1, TACSTD2, NINJ1, REN, GCG, SERPINA9, KAZALD1, SERPINA12, PODXL, AMN, IGF1R, LTBP2, ANGPTL3, SCARA5, B4GAT1, ROBO2, PDGFC, CA12, DDC, EDIL3, XPNPEP2, PRTG, NQO2, AMBP, ERBB2, IL6, MCP-1, VEGFD, 15 GDF-2, MUC-16, KLK10, FAM3C, uPA, AGR2, METRNL, RTN4R, IGF2R, NTRK2, ITGB6, SCARF2, SCGB3A2, RGMB, EZR, PROC, FURIN, PIgR, and/or SMOC2 indicates that the human subject has undergone a therapeutic response to the therapy comprising the JAK inhibitor.

20 35. The method of claim 34, comprising:

measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP,

- ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2,
- 5 ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1,
- 10 MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13,
- 15 STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, and RELT in the first biological sample; and
- 20 measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16,

SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, GPNMB, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, 5 SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, 10 VSIG4, SIGLEC10, CD6, SKAP1, FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF 15 subunit A, TNFRSF11A, gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, and RELT in the second biological sample,

wherein a reduced concentration in the second biological sample, as compared 20 to the first biological sample, of at least one of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1,

PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, HAVCR2, CD84, STX8, LY9, ZBTB16, CD200R1, TOP2B, THY 1, PRKRA, ITGB1BP2, CD48, CD244, HCLS1, MPO, SIT1, ICAM3, SOST, DDX58, TNF-R2, TRAF2, SMAD1, LAIR-2, PIK3AP1, VSIG4, SIGLEC10, CD6, SKAP1, 5 FCRL5, CD177, KLRD1, ERBB2IP, MILR1, MIF, SNAP23, NUB1, TIGAR, STAMPB, DSC2, LAIR1, FKBP1B, RASSF2, FATC1, CBL, IgG Fc receptor II-b, GLO1, PVALB, SCAMP3, SLAMF8, STX16, TNF-R1, DFFA, PPP1R2, ANG-1, CCL5, MAP2K6, CRKL, CD38, CXCL5, PILRA, IRAK1, CA13, STX6, PRTN3, IL-5R-alpha, ESM-1, EGLN1, CLEC1B, TYMP, SNAP29, PDGF subunit A, TNFRSF11A, 10 gal-8, GCNT1, STK4, TNC, THBS4, CLEC4D, SIGLEC6, WASF1, WAS, COMT, RETN, SH2D1A, RNASE3, PAR-1, CD69, SIGLEC1, FR-gamma, ADAM 8, AZU1, AREG, SDC4, DCTN2, BID, and RELT, and/or an increased concentration in the second biological sample, as compared to the first biological sample, of at least one of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, 15 Flt3L, PLIN1, SPON2, Gal-4, FABP4, DNER, GAL, CPM, VWC2, PPY, PAM, PVR, SERPINA5, ST3GAL1, CST5, CES2, CNDP1, CX3CL1, HO-1, PRELP, ADM, VSIG2, FABP2, CEACAM5, SLITRK2, MCP-1, NTRK3, CLUL1, CXCL16, SCF, TMPRSS5, REG4, hK11, SCGB3A1, DKKL1, NEP, CPA2, Ep-CAM, THBS2, and GPNMB indicates that the human subject has undergone a therapeutic response to the therapy 20 comprising the JAK inhibitor.

36. The method of claim 34, comprising:

measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO,

hK14, KIM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, and HAVCR2 in the first biological sample; and

measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, KIM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, and HAVCR2 in the second biological sample,

wherein a reduced concentration in the second biological sample, as compared to the first biological sample, of at least one of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, CNTNAP2, ZBTB16, CD163, TXLNA, MEPE, BACH1, MAX, NFKBIE, hOSCAR, LAT, PTPRJ, SIRT2, SIRPB1, AXIN1, EIF4G1, PTX3, TRIM5, IDUA, NCF2, SELP, ARHGEF12, CASP-3, CD27, MAP4K5, DAPP1, PRDX5, TLT-2, PARK7, IL2-RA, FOXO1, ST1A1, GRAP2, NBN, CD93, FCGR2A, DCTN1, IRF9, and HAVCR2, and/or an increased concentration in the second

biological sample, as compared to the first biological sample, of at least one of
TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, THPO, hK14, and
KIM1 indicates that the human subject has undergone a therapeutic response to the
therapy comprising the JAK inhibitor.

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37. The method of claim 34, comprising:

measuring the concentration of at least one protein selected from the group
consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, INPPL1,
LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2,
10 BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, and CNTNAP2 in the first
biological sample; and

measuring the concentration of at least one protein selected from the group
consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, CCL25, INPPL1,
LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2,
15 BANK1, TPSAB1, YES1, LAMP3, GM-CSF-R-alpha, and CNTNAP2 in the second
biological sample,

wherein a reduced concentration in the second biological sample, as compared
to the first biological sample, of at least one of INPPL1, LAT2, CLEC7A, PPP1R9B,
NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, ITGB2, BANK1, TPSAB1, YES1,
20 LAMP3, GM-CSF-R-alpha, and CNTNAP2, and/or an increased concentration in the
second biological sample, as compared to the first biological sample, of at least one of
TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, Gal-3, and CCL25 indicates that the
human subject has undergone a therapeutic response to the therapy comprising the JAK
inhibitor.

38. The method of claim 34, comprising:

measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, and ITGB2 in the
5 first biological sample; and

measuring the concentration of at least one protein selected from the group consisting of TMPRSS15, CCL11, FAM3B, MMP7, NCAM1, INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, and ITGB2 in the second biological sample,

10 wherein a reduced concentration in the second biological sample, as compared to the first biological sample, of at least one of INPPL1, LAT2, CLEC7A, PPP1R9B, NEMO, SH2B3, BCR, CD5, DNAJB1, CCL17, and ITGB2, and/or an increased concentration in the second biological sample, as compared to the first biological sample, of at least one of TMPRSS15, CCL11, FAM3B, MMP7, and NCAM1 indicates
15 that the human subject has undergone a therapeutic response to the therapy comprising the JAK inhibitor.

39. The method of any one of the preceding claims, wherein the biological sample is blood, serum, plasma, urine, spinal fluid, saliva, lacrimal fluid, or sweat.

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40. The method of any one of the preceding claims, wherein the biological sample is blood, serum, or plasma.

41. The method of any one of the preceding claims, wherein the concentration of the protein is measured by an immunological method.

42. The method of claim 41, wherein the immunological method is selected from the group consisting of enzyme-linked immunosorbent assay, enzyme immunoassay, radioimmunoassay, chemiluminescent immunoassay, electrochemiluminescence immunoassay, latex turbidimetric immunoassay, latex photometric immunoassay, immuno-chromatographic assay, and western blotting.

43. The method of any one of claims 1 to 40, wherein the concentration of the protein is measured by mass spectrometry.

44. The method of any one of the preceding claims, wherein the JAK inhibitor is itacitinib.

45. The method of any one of claims 1 to 43, wherein the JAK inhibitor is 4-[3-(cyanomethyl)-3-(3',5'-dimethyl-1H,1'H-4,4'-bipyrazol-1-yl)azetidin-1-yl]-2,5-difluoro-N-[(1S)-2,2,2-trifluoro-1-methylethyl]benzamide or a pharmaceutically acceptable salt thereof or ((2R,5S)-5-{2-[(1R)-1-hydroxyethyl]-1H-imidazo[4,5-d]thieno[3,2-b]pyridin-1-yl}tetrahydro-2H-pyran-2-yl)acetonitrile or a pharmaceutically acceptable salt thereof.

46. The method of any one of the preceding claims, wherein the GvHD is acute GvHD.

47. The method of any one of claims 1 to 45, wherein the GvHD is chronic GvHD.