Table S4 – Genes causative for IBD and IBD-like syndromes. Syndromes with an age of onset range spanning multiple groups received all applicable gene onset subgroup tags.

Gene	Associated syndrome and reference	Age of onset category (tag)
ADAM17	ADAM17 deficiency (1)	NEO-IBD
IL10	NEO-IBD due to IL-10 signaling defects (1, 2)	NEO-IBD
IL10RA	NEO-IBD due to IL-10 signaling defects (1-3)	NEO-IBD
IL10RB	NEO-IBD due to IL-10 signaling defects (1-3)	NEO-IBD
TRIM22	Reported as causative in NEO-IBD patient (4)	NEO-IBD
EGFR	Neonatal inflammatory skin and bowel disease 2 (2, 5)	NEO-IBD
TTC7A	TTC7A deficiency (1, 6)	NEO-IBD
EPCAM	Tufting enteropathy (7)	NEO-IBD
WAS	B- and T-cell development WAS (1)	NEO-IBD, INF-IBD
DKC1	Hoyeraal–Hreidarsson syndrome (1)	NEO-IBD, INF-IBD
RTEL1	Hoyeraal–Hreidarsson syndrome (1)	NEO-IBD, INF-IBD
IL21	IL-21 deficiency (8)	NEO-IBD, INF-IBD
NCF4	Reported as causative in NEO-IBD and INF-IBD patients (9)	NEO-IBD, INF-IBD
ARPC1B	WAS-like combined immunodeficiency (10)	NEO-IBD, INF-IBD
CYBA	Chronic granulomatous disease subtype (11)	NEO-IBD, INF-IBD
CYBB	Chronic granulomatous disease subtype (11)	NEO-IBD, INF-IBD
NCF1	Chronic granulomatous disease subtype (11)	NEO-IBD, INF-IBD
NCF2	Chronic granulomatous disease subtype (11)	NEO-IBD, INF-IBD
BTK	Agammaglobulinemia or Hypogammaglobulinemia (1, 12)	INF-IBD
PIK3R1	Agammaglobulinemia or Hypogammaglobulinemia (1, 13)	INF-IBD
CD79B	Agammaglobulinemia or Hypogammaglobulinemia (14)	INF-IBD
AIRE	Autoimmune Polyendocrinopathy Candidiasis Ectodermal Dystrophy (2, 5, 15)	INF-IBD
CHD7	CHARGE syndrome (16)	INF-IBD
COG6	Congenital disorder of glycosylation, type III (2, 5, 17, 18)	INF-IBD
CD19	Common variable immune deficiency 3 (16, 19, 20)	INF-IBD
MS4A1	Common variable immune deficiency 5 (16, 21)	INF-IBD
CD81	Common variable immune deficiency 6 (16, 22)	INF-IBD
MEFV	Familial Mediterranean fever (1)	INF-IBD
CD40LG	Hyper IgM syndrome type 1 (1)	INF-IBD
AICDA	Hyper IgM syndrome type 2 (1, 23)	INF-IBD
CD40	Hyper IgM syndrome type 3 (16)	INF-IBD
FOXP3	IPEX syndrome (1)	NEO-IBD, INF-IBD, VEO-IBD
DCLRE1C	Omenn syndrome (16)	INF-IBD
IL7R	Omenn syndrome (16)	INF-IBD
RAG1	Omenn syndrome (16)	INF-IBD
RAG2	Omenn syndrome (16)	INF-IBD
PLCG2	Phospholipase C-γ2 defects (1)	INF-IBD

ZBTB24	Immunodeficiency, Centromeric Instability and Facial Anomalies Syndrome 2 (24)	INF-IBD
CARD9	Hereditary candidasis (25)	INF-IBD
PIK3CD	Immunodeficiency 14 (26)	INF-IBD
ITCH	Autoimmune disease, multisystem with facial dysmorphism (2, 5, 27)	INF-IBD, VEO-IBD
COL7A1	Dystrophic bullosa (1, 28)	INF-IBD, VEO-IBD
IL2RA	Immunodeficiency 41 with lymphoproliferation and autoimmunity (1)	INF-IBD, VEO-IBD
STAT1	Immunodeficiency 31a, 31b and 31c (1)	INF-IBD, VEO-IBD
ADA	Severe combined immunodeficiency (1)	INF-IBD, VEO-IBD
CD3G	Severe combined immunodeficiency (1)	INF-IBD, VEO-IBD
IL2RG	Severe combined immunodeficiency (1)	INF-IBD, VEO-IBD
LIG4	Severe combined immunodeficiency (1)	INF-IBD, VEO-IBD
CASP8	Caspase 8 deficiency (2, 5)	VEO-IBD
CR2	Common variable immune deficiency 7 (16)	VEO-IBD
LRBA	Common variable immune deficiency 8 (16)	VEO-IBD
TGFBR1	Loeys-Dietz syndrome, type 1 (2, 5)	VEO-IBD
TGFBR2	Loeys-Dietz syndrome, type 2 (2, 5)	VEO-IBD
MASP2	MASP2 deficiency (2, 5)	VEO-IBD
ITK	Severe combined immunodeficiency (16)	VEO-IBD
LCK	Severe combined immunodeficiency (16)	VEO-IBD
ZAP70	Severe combined immunodeficiency (16)	VEO-IBD
TNFRSF13B	TACI deficiency (2, 5, 16)	VEO-IBD
SKIV2L	Trichohepatoenteric syndrome (1)	INF-IBD, VEO-IBD, EO-IBD
TTC37	Trichohepatoenteric syndrome (1)	VEO-IBD
MSH5	Reported as causative in VEO-IBD patient (29)	VEO-IBD
SH2D1A	X-linked lymphoproliferative syndrome 1 (1)	VEO-IBD
XLP1	X-linked lymphoproliferative syndrome 1 (16)	VEO-IBD
SLAMF1	X-linked lymphoproliferative syndrome 1 with defective SLAMF1 (16)	VEO-IBD
XLP2	X-linked lymphoproliferative syndrome 2 (16)	VEO-IBD
UNG	Hyper IgM syndrome type 5 (16)	VEO-IBD, EO-IBD
SLC9A3	Congenital sodium diarrhea (30)	VEO-IBD, EO-IBD
ITGB2	Leukocyte adhesion deficiency 1 (1, 31)	INF-IBD, VEO-IBD, EO-IBD, PED-IBD
XIAP	X-linked lymphoproliferative syndrome 2 (1, 32)	INF-IBD, VEO-IBD, EO-IBD, PED-IBD
G6PC3	Congenital neutropenia (1)	VEO-IBD, EO-IBD, PED-IBD
GUCY2C	Familial diarrhea (1)	VEO-IBD, EO-IBD, PED-IBD

SLC37A4	Glycogen storage disease type lb (1)	VEO-IBD, EO-IBD, PED-IBD
HPS1	Hermansky-Pudlak syndrome 1 (1)	VEO-IBD, EO-IBD, PED-IBD
HPS4	Hermansky-Pudlak syndrome 4 (1)	VEO-IBD, EO-IBD, PED-IBD
HPS6	Hermansky-Pudlak syndrome 6 (1)	VEO-IBD, EO-IBD, PED-IBD
DOCK8	Hyper IgE syndrome (1)	EO-IBD
FERMT1	Kindler syndrome (1, 33)	VEO-IBD, EO-IBD, PED-IBD
MVK	Mevalonate kinase deficiency (29)	EO-IBD
TNFAIP3	Early-onset autoinflammatory disease (34)	EO-IBD
PTEN	PTEN hamartoma tumor syndrome (35)	EO-IBD
IKBKG	X-linked ectodermal immunodeficiency (1)	EO-IBD
CTLA4	Autoimmune lymphoproliferative syndrome type V (2, 5, 36)	EO-IBD, PED-IBD
ICOS	Common variable immune deficiency 1 (1)	EO-IBD, PED-IBD
STXBP2	Familial hemophagocytic lymphohistiocytosis (1) type 5	EO-IBD, PED-IBD
STAT3	Hyper IgE syndrome (29)	EO-IBD, PED-IBD

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