

Supplementary Material

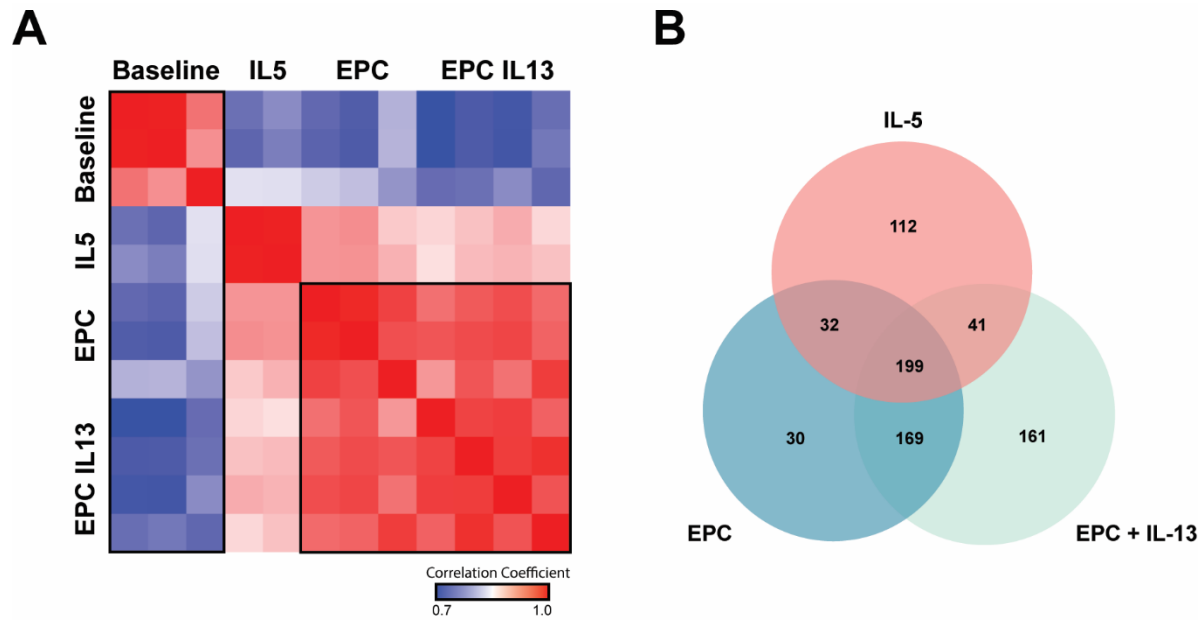


Figure S1. Treatment-specific responses of eosinophil gene expression. (A) Pearson's correlation coefficient was calculated between each eosinophil RNA sequencing sample. Coefficients range from 0.7 (blue) to 1.0 (red). (B) DEseq was used to identify significantly upregulated genes in cultured eosinophils with respect to baseline. Genes with a fold change > 2 and an adjusted p value < 0.05 in each condition were compared between conditions.

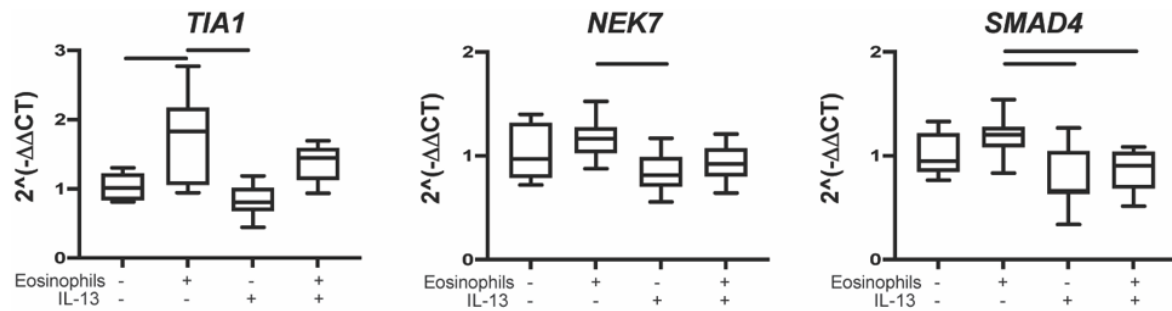


Figure S2. Verified coculture-responsive gene expression in epithelial cells. Expression of *TIA1*, *NEK7*, and *SMAD4* was quantified by rtPCR. Data represent 5-7 technical replicates compiled over 3 biological replicates. Significance was calculated with one-way ANOVA and bars represent post-test significance at $p < 0.05$.

Supplemental Table S1. Multiplex array of coculture supernatants

	Eosinophils + IL-5			Eosinophils + EPC2			Eos + EPC2 + IL-13			EPC2		EPC2 + IL-13	
EGF	315.3	295.0	297.0	6.9	7.5	5.7	5.3	5.0	7.2	5.7	5.0	6.1	5.5
FGF-2	121.2	111.2	124.1	46.0	53.6	51.2	37.0	59.3	51.2	54.2	52.4	57.7	48.7
Eotaxin-1	3.6	4.7	2.2	2.6	3.3	6.6	3.1	4.5	3.1	2.4	1.7	3.3	4.7
TGF-α	1.5	1.6	1.4	34.6	38.6	32.3	34.6	40.1	35.1	30.4	44.4	34.7	35.0
G-CSF	ND	1.2	ND	2893.1	2554.0	2960.3	OOO	OOO	8681.3	4325.8	4610.5	8425.3	9073.5
Fit-3L	2.7	1.3	2.2	13.1	15.2	13.8	17.7	21.1	19.1	13.5	13.6	16.6	18.0
GM-CSF	1.0	2.2	1.2	89.5	84.0	128.0	260.7	249.5	196.4	181.6	177.1	179.1	188.3
Fractalkine	10.1	50.6	16.0	47.7	33.8	37.8	36.8	40.8	39.8	43.7	35.8	38.8	29.9
IFNα2	3.2	9.4	3.2	72.2	80.1	67.9	110.6	120.4	101.1	77.6	71.1	113.4	120.4
IFNγ	2.0	0.1	1.2	1.8	1.1	2.3	10.1	9.7	9.0	2.2	2.0	10.8	8.5
GRO-α	18.8	33.6	31.9	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO
IL-10	0.0	0.1	0.2	4.0	3.6	3.1	16.4	15.5	11.1	3.0	3.7	8.8	7.2
MCP-3	7.6	ND	8.4	5.6	8.4	9.7	0.2	10.0	9.7	ND	6.9	13.4	10.9
IL-12P40	2.4	2.1	4.8	50.9	47.6	43.3	72.6	69.1	62.9	48.3	49.0	67.1	65.4
MDC	133.2	OOO	43.2	29.8	120.0	120.0	85.5	265.0	110.7	133.2	101.0	128.8	90.8
PDGF-AA	0.2	0.1	0.1	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO
IL-13	0.2	0.3	0.3	2.4	2.2	2.2	OOO	OOO	OOO	2.7	2.5	OOO	OOO
PDGF-BB	2.1	1.1	1.8	953.6	1079.4	814.0	419.6	542.5	439.3	710.9	821.6	393.1	469.0
IL-15	0.2	ND	ND	15.2	14.4	13.6	15.9	17.1	14.6	15.0	14.1	14.1	15.4
sCD40L	1.1	0.5	0.7	0.6	0.2	0.1	0.7	0.2	0.6	ND	0.4	1.6	0.7
IL-1RA	2.8	0.9	0.9	536.3	727.0	648.8	1292.8	1039.9	1376.4	124.8	302.2	222.0	196.2
IL-1α	0.5	ND	ND	104.3	133.1	83.6	262.1	418.3	322.6	49.3	57.5	153.8	162.3
IL-1β	ND	0.2	0.1	4.3	7.2	3.9	9.7	11.5	13.6	3.4	3.4	8.0	6.6
IL-2	0.2	0.1	ND	4.4	4.6	3.9	7.0	8.2	6.0	4.2	3.9	6.5	6.4
IL-4	3.2	4.7	3.5	5.0	6.6	7.8	2.9	4.7	OOO	7.4	4.1	6.3	6.6
IL-5	OOO	OOO	OOO	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
IL-6	ND	0.1	0.0	8.1	6.2	8.1	11.0	9.9	9.3	10.0	10.4	13.3	12.1
IL-8	0.5	1.1	0.6	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO	OOO
IP-10	3.6	3.1	ND	4148.7	4818.3	4898.5	8485.6	13277.4	4818.8	3812.6	4805.5	8316.9	4202.4
MCP-1	28.0	38.9	32.5	41.8	41.0	41.9	19.1	21.6	19.5	7.8	7.4	4.7	5.4
MIP-1α	3.4	ND	3.9	8.6	7.1	7.3	15.3	15.1	13.0	14.4	11.1	52.3	30.3
MIP-1β	4.6	OOO	1.5	19.8	20.1	17.7	30.7	36.9	28.9	15.5	13.7	32.3	25.0

RANTES	5.4	2.5	5.4	22.7	22.4	24.3	45.1	50.0	41.2	57.7	60.2	107.2	122.6
TNFa	0.1	0.1	0.2	196.9	181.3	173.6	226.3	213.8	182.7	193.9	193.3	178.2	149.8
VEGF-A	10.7	10.9	10.7	606.7	447.7	451.9	OOR	OOR	OOR	404.3	475.9	OOR	1206.6
IL-18	2.5	1.8	2.1	21.9	22.3	30.8	23.8	20.0	26.4	9.2	10.3	8.0	9.0
Eotaxin	0.3	ND	ND	0.2	0.6	ND	19.5	26.0	24.5	0.6	1.1	124.4	148.1
MCP-2	ND	ND	5.7	3.6	2.4	ND	4.1	2.4	3.6	4.5	2.4	ND	5.4
BCA-1	0.2	0.2	0.1	8.9	11.2	11.3	0.4	0.4	0.3	6.9	6.3	0.3	0.2
IL-16	5.7	3.9	2.8	ND	ND	ND	7.8	1.7	3.5	ND	ND	ND	ND
Eotaxin-3	ND	ND	ND	ND	ND	ND	276.4	275.3	196.5	ND	ND	305.2	358.5
IL-23	18.8	25.4	12.2	25.4	OOR	OOR	35.4	22.1	28.7	OOR	OOR	OOR	12.2
TRAIL	0.3	0.3	0.4	1.4	1.5	1.6	3.0	3.0	4.0	1.0	1.1	1.6	1.8
ENA-78	4.3	1.4	2.5	21.1	35.8	20.5	30.3	29.5	24.1	14.6	16.1	28.7	26.6

Values are represented as pg/mL. The following proteins were undetectable in all samples and are excluded from the table: IL-12p70, IL-17A, IL-7, IL-9, TNF- β , I-309, TARC, 6CKine, SCF, TSLP, IL-33, IL-20, IL-21, and CTACK. Not detected (ND) samples fell below the lower limit of detection, and out of range (OOR) values exceeded the upper limit of detection.

Supplemental Table S2. Blood donor traits

	Race and Ethnicity	Age (Years \pm SD)
All Donors (13)	13/13 White/Caucasian 2/13 Hispanic	36 \pm 9
Female (9)	9/9 White/Caucasian 2/9 Hispanic	36 \pm 9
Male (4)	4/4 White/Caucasian 0/4 Hispanic	38 \pm 8