

Table 1. Effects of PI3K inhibition on cell motility and chemotaxisa

Cell type	PI3K inhibitors	Effects on chemotaxis, cell migration, and motility^b	Chemoattractant	Ref.
<i>Dictyostelium</i>	30 μ M LY	50-60% reduction	cAMP	a
Hepatic stellate cell	WM	Inhibition Inhibition	IGF	b
Megakaryocytic cell	LY	43% inhibition	SDF-1	c
Swiss 3T3 cell	100 nM-10 μ M LY	No effect	PDGF	d
Vascular smooth muscle cell	1 nM-1 μ M WM	No effect	PDGF	d
Vascular smooth muscle cell	200 nM WM 50 μ M LY	50% inhibition 80% inhibition	uPA	e
Vascular smooth muscle cell	100 μ M LY	85-89% inhibition	TSP-1, Fn and Vn	f
Rat osteoclast	100 or 500 nM WM 100 μ M LY	Inhibition Inhibition	M-CSF	g
Neutrophil	10-100 nM WM 0.5-10 μ M LY	Inhibition Inhibition	C1q	h
C2C12 myoblast	10 μ M LY	No effect	bFGF, HGF and IGF-I	i
PC cell	50 nM WM	70% inhibition	EGF	j
RBL-2H3 cell	100 nM WM	Inhibition	LTB ₄ , fMLP and PAF	k
Peritoneal mast cell	50 μ M LY	73% inhibition	NGF	l
Jurkat cell	100 nM WM	Inhibition	SDF-1	m
Normal T lymphocyte	100 nM WM	Inhibition	SDF-1	m
Neutrophil	WM	Inhibition	PDGF, TGF	n
CHO cell	100 nM WM	Inhibition	fMLP	o
Cell type	Gene knockouts	Effects on chemotaxis, cell migration, motility	Chemoattractant	Ref.
Neutrophil	pi3k ^{-/-} mice	50% inhibition	fMLP	p, q, r
Macrophage	pi3k ^{-/-} mice	50-70% inhibition	SDF-1 and C5a	p
<i>Dictyostelium</i> cell	<i>pi3k1/2</i> ^{-/-}	50-60% inhibition	cAMP, folate	a
Cell type	PI3K neutralizing antibody	Effects on cell migration	Chemoattractant	Ref.

Macrophage	P110 /p110	30%-50% inhibition	CSF-1	s
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^aAbbreviations: bFGF, basic fibroblast growth factor; C1q, first component of complement system; C5a, fifth component of complement system; CSF-1, colony-stimulating factor 1; EGF, epidermal growth factor; fMLP, formyl-Met-Leu-Phe; Fn, fibronectin; HGF, hepatocyte growth factor; IGF, insulin-like growth factor; LTB₄, leukotriene B₄; LY, LY294002; M-CSF, macrophage colony-stimulating factor; NGF, nerve growth factor; PAF, platelet-activating factor; PDGF, platelet-derived growth factor; PI3K, phosphatidylinositide 3-kinase; *pi3k*, gene encoding PI3K; SDF-1, stromal-derived factor 1; TGF, transforming growth factor; TSP-1, thrombospondin 1; uPA, urokinase-type plasminogen activator; Vn, vitronectin; WM, Wortmannin.

^bSee text for discussion on effect of inhibitors and mutations on chemotaxis and/or motility.

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