

S2 Table

<i>Drosophila</i> Symbol	Gene Name	Unpaired	Unpaired2	Unpaired3	Human homologue	Enzymatic Activity
<i>Dhfr</i>	<i>Dihydrofolate reductase</i>	-0.59	1.23	0.07	DHFR	dihydrofolate reductase
<i>pug</i>	<i>pugilist</i>	-0.21	0.84	0.15	MTHFD1	methylenetetrahydrofolate dehydrogenase (NADP+ dependent) 1, methenyltetrahydrofolate cyclohydrolase, formyltetrahydrofolate synthetase
<i>Prat2</i>	<i>Phosphoribosylamidotransferase 2</i>	0.46	0.25	-0.79	PPAT	phosphoribosyl pyrophosphate amidotransferase
<i>ade3</i>	<i>adenosine 3</i>	0.05	-0.36	-0.35	GART	phosphoribosylglycinamide formyltransferase, phosphoribosylglycinamide synthetase, phosphoribosylaminoimidazole synthetase
<i>CG11089</i>	<i>CG11089</i>	0.10	0.44	1.00	ATIC	5-aminoimidazole-4-carboxamide ribonucleotide formyltransferase/IMP cyclohydrolase
<i>Ts</i>	<i>Thymidylate synthetase</i>	-0.42	-0.71	-0.79	TYMS	thymidylate synthetase
<i>hop</i>	<i>hopscotch</i>	-5.74	-4.56	-5.52	JAK2	tyrosine kinase

6x2xDrafLuc JAK/STAT pathway reporter activity (expressed as z-scores) following knockdown of the indicated *Drosophila* genes and stimulation with the three ligands Unpaired, Unpaired2 and Unpaired3. Knockdown of enzymes central to the folate / purine and thymidine synthesis pathways do not interact significantly in any assay while knockdown of *hopscotch*, the *Drosophila* JAK homologue, produces a strong and consistent reduction in activity. Each screen was carried out in triplicate and scores shown are the mean of three replicates. Scores above +3 or below -3 are considered significant. Human homologues and their enzymatic activities are shown.