

Table S1. Sequence comparison between *P. papatasi* salivary apyrase primer set 2 product and apyrase transcripts in other sandflies.

Genus	Species *	Accession No.	Identity ^a (%)	Coverage ^b (%)
<i>Phlebotomus</i>	<i>papatasi</i>	AF261768.1	100.0	100.0
<i>Phlebotomus</i>	<i>duboscqi</i>	DQ834335.1	91.2	100.0
<i>Phlebotomus</i>	<i>sergenti</i>	HM560862.1	78.2	100.0
<i>Nyssomyia</i>	<i>intermedia</i>	KA660068.1	64.5	100.0
<i>Phlebotomus</i>	<i>orientalis</i>	KC170936.1	63.2	100.0
<i>Phlebotomus</i>	<i>argentipes</i>	DQ136150.1	62.0	96.1
<i>Phlebotomus</i>	<i>perniciosus</i>	DQ192491.1	61.8	100.0
<i>Phlebotomus</i>	<i>ariasi</i>	AY845193.1	61.4	100.0
<i>Phlebotomus</i>	<i>tobbi</i>	HM135951.1	61.0	100.0
<i>Phlebotomus</i>	<i>arabicus</i>	EZ000631.1	60.5	100.0
<i>Lutzomyia</i>	<i>ayacuchensis</i>	AK416757.1	58.8	100.0
<i>Lutzomyia</i>	<i>longipalpis</i>	AF131933.1	57.5	100.0

*: If sand fly species have multiple apyrases, the transcript with the highest sequence identity was included in this table. ^a: the percentage of query with a direct match in the alignment to the *P. papatasi* salivary apyrase primer set 2 product sequence. ^b: the percentage of query covered by alignment to the *P. papatasi* salivary apyrase primer set 2 product sequence.

Table S2. Sequence comparison between *P. papatasi* salivary apyrase primer set 2 product and top blastn hits.

Kingdom	Order	Genus	Species	Accession #	Identity ^a (%)	Coverage ^b (%)
Animalia	Diptera	<i>Phlebotomus</i>	<i>papatasi</i>	AF261768.1	100.0	100.0
Animalia	Diptera	<i>Phlebotomus</i>	<i>papatasi</i>	JQ988892.1	98.7	100.0
Animalia	Diptera	<i>Phlebotomus</i>	<i>duboscqi</i>	DQ834335.1	91.6	99.0
Animalia	Diptera	<i>Phlebotomus</i>	<i>duboscqi</i>	DQ834331.1	87.7	99.0
Animalia	Diptera	<i>Bichromomyia</i>	<i>olmecca</i>	KX011391.1	73.5	43.0
Animalia	Diptera	<i>Lutzomyia</i>	<i>longipalpis</i>	AF131933.1	75.8	28.0
Animalia	Diptera	<i>Stomoxys</i>	<i>calcitrans</i>	XM_013248487.1	80.7	24.0
Animalia	Strongylyda	<i>Haemonchus</i>	<i>contortus</i>	LS997564.1	78.2	24.0
Animalia	Chiroptera	<i>Hipposideros</i>	<i>armiger</i>	XM_019631939.1	85.0	17.0
Animalia	Chiroptera	<i>Hipposideros</i>	<i>armiger</i>	XM_019631940.1	85.0	17.0
Animalia	Chiroptera	<i>Hipposideros</i>	<i>armiger</i>	XM_019631941.1	85.0	17.0
Animalia	Chiroptera	<i>Hipposideros</i>	<i>armiger</i>	XM_019631942.1	85.0	17.0
Animalia	Tricladida	<i>Dugesia</i>	<i>japonica</i>	AB610879.1	85.0	17.0
Fungi	Schizosaccharomycetales	<i>Schizosaccharomyces</i>	<i>octosporus</i>	XM_013164291.1	87.5	17.0
Animalia	Apterygiformes	<i>Apteryx</i>	<i>australis</i>	LK066971.1	86.8	16.0
Animalia	Apterygiformes	<i>Apteryx</i>	<i>australis</i>	LK235606.1	86.8	16.0
Animalia	Diptera	<i>Lucilia</i>	<i>cuprina</i>	XM_023439892.1	84.2	16.0
Plantae	Solanales	<i>Ipomoea</i>	<i>triloba</i>	CP025662.1	84.2	16.0
Animalia	Cypriniformes	<i>Danio</i>	<i>rerio</i>	CU468826.10	86.1	15.0
	Bacillales	<i>Bacillus</i>	<i>pumilus</i>	CP027116.1	86.1	15.0
Animalia	Coleoptera	<i>Aethina</i>	<i>tumida</i>	XM_020009867.1	93.8	14.0
Animalia	Coleoptera	<i>Aethina</i>	<i>tumida</i>	XM_020009868.1	93.8	14.0
Animalia	Coleoptera	<i>Aethina</i>	<i>tumida</i>	XM_020009869.1	93.8	14.0
Animalia	Coleoptera	<i>Aethina</i>	<i>tumida</i>	XM_020009870.1	93.8	14.0
Animalia	Artiodactyla	<i>Bos</i>	<i>mutus</i>	CP027089.1	87.9	14.0
Animalia	Artiodactyla	<i>Ovis</i>	<i>canadensis</i>	CP011903.1	87.9	14.0
Bacteria	Synechococcales	<i>Prochlorococcus</i>	<i>marinus</i>	CP000095.2	88.6	14.0
Bacteria	Clostridiales	<i>Blautia</i>	<i>sp.</i>	CP030280.1	93.3	13.0
Plantae	Lamiales	<i>Erythranthe</i>	<i>guttatus</i>	XM_012988858.1	90.3	13.0
Plantae	Malvales	<i>Theobroma</i>	<i>cacao</i>	LT594797.1	90.3	13.0
Plantae	Malvales	<i>Theobroma</i>	<i>cacao</i>	XM_007010613.2	90.3	13.0
Plantae	Malvales	<i>Theobroma</i>	<i>cacao</i>	XM_018129620.1	90.3	13.0
Plantae	Malvales	<i>Theobroma</i>	<i>cacao</i>	LT594792.1	92.9	12.0

Shaded region denotes transcript with > 50% coverage. ^a: the percentage of query with a direct match in the alignment to the *P. papatasi* salivary apyrase primer set 2 product sequence. ^b: the percentage of query covered by alignment to the *P. papatasi* salivary apyrase primer set 2 product sequence.