

L.infantum	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
L.donovani	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
L.braziliensis	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
L.major	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
L.mexicana	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
T.cruzi	1	MSICASAMRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
Arabidopsis_tha	1	EPCHIKKISISILSISLSSSSMASQSALLQKQLKDLCKHPVDGFSAGLVDEKNIFEWSVITICPPDTLYEGGFNAIMTFPQNYNS		
Homo_sapiens	1	MSGILSLRLAQEIKAWRKDHPPGFVAVPTKNDGTMNLMNNECAIPGKKGTPTNKGGLFKLRMLFKDDYSSSPPKC	MFEPQLFHPNVYP	
Xenopus_laevis	1	MAKKRIQKELMDLQRDPPAQCSAGPVGEDLFHWQATIMGPNDS	FQGGVFFLTIFPTDYPPFKPKVAPTTKIYHPNINS	SGICLDI
Oryctolagus_cun	1	MSTARRRLMRDFKRLQEDPPVGVSGAPSENNIMQWNAVIFGPEGTPFEDGTGFKLVIEFSEIYPNKKPTVRLSKMFPNPNVYADGSIC		
Crithidia_fasci	1	MPLTAACMRRLMROMQEVEQEHFV	DGVQVRPADSMSEYHFDLDGPEGTPFAAGRFHVALIFDEQYPEVPPK	GFFRTKIFHPNISERGDI
Drosophila_mela	1	MTAPRRLRKELSDLQGNALKSFRDIKADDDNLLRWTLGLIVDNE	PYNKGA	FRIEINFPAEYPPKPPKINFKTRIYHPNIDEKGQVCLP
Mesocricetus_au	1	MSTPARRRLMRDFKRLQEDPPAGVSGAPSENNILVWNAVIFGPEGTPFEDVYADGSICLDILQNRWS	PTYDVSSILTSIQSLLEPNP	
L.infantum	96	DWAPTLGLRHILVIRCLLIEPN	ESALNEEAGRLILEEVAAYERKAAMYTAIN	AARPNGVPRFTLPEVQAEKASSLVTADASAPVAG
L.donovani	96	DWAPTLGLRHILVIRCLLIEPN	ESALNEEAGRLILEEVAAYERKAAMYTAIN	AARPNGMPRFTLPEVQAEKASSLVTADASAPVAG
L.braziliensis	96	DWSSTLGLRHILAVIRCLLIEPN	ESALNEEAGRLILEEVAATEERKAAMYTAIN	AARPNGVPRFTLSEAEKASRSATADISTGVDA
L.major	96	DWSPTLGLRHILVIRCLLIEPN	ESALNEEAGRLILEEVAAYERKAAMYTAIN	AARPNGVPRFTLPEVKAEKASSVTACASAGAA
L.mexicana	96	DWSPTLGLRHILVIRCLLIEPN	ESALNEEAGRLILEEVAAYERKAAMYTAIN	AARPNGVPRFTLPEVKAEKASSVTADASAPVNA
T.cruzi	96	DMKPSLGLRHILVIRCLLIEPN	ESALNEEAGRLILEEVAAYERKAAMYTAIN	AARPNGVPRFTLPEVKAEKASSVTADASAPVNA
Arabidopsis_tha	96	SDMHPNVSVDGRVCISILHPPGDDPSGYELASERWTPVHTVESIMLSIISMLSGPNDES	PANVEAAKEWRDKRDEFKKVSR	CVRKVS
Homo_sapiens	96	ILEEDKDWKPAITIKQILGLIQELLNEPNIQDPAQAEAYTIYCQNRVEYEKRVRA	QAKKFA	S-----
Xenopus_laevis	96	ALTYSKVLSLCSLLCDPNPDDPLVPEIAHTYKADREKYNRLAREWTQK	AM-----	
Oryctolagus_cun	96	WSPTYDVSSILTSIQSLLEPNPNSPANQAAQLYQENKREYEKRVSAIVEQSWNDS		
Crithidia_fasci	96	DWTPNVGLRHILAVIRCLLIEPN	ESALNEEAGRLILEEVAATEERKAAMYTAIN	AARPDGAPRYTLPGEGRAPAATSAAPTAVSGG
Drosophila_mela	96	KPATRTDQVVQALVDLINDPEPEHPLRAELAEEL	LKDRKKFVKNAEDYTKKHSEKRPAD	-----
Mesocricetus_au	96	AAQLYQENKREYEKRVSAIVEQSWRDC	-----	
L.infantum	191	TAAASASSMANGSTPSTATRRLTLSEANCHPGAATAAEKAEKSKKKALRRI	--	
L.donovani	191	TAAASASSMANGSTPSTATRRLTLSEANCHPGAATAAEKAEKSKKKALRRI	--	
L.braziliensis	191	TAGASLSLTGDSVPSASARKLAPSEANCHRGPNAATDKVEKSKKKALRRI	--	
L.major	191	AAAAAASSMANGGAPSTATRGLTLSEANCHPGSATAAEKAEKSKKKALRRI	--	
L.mexicana	191	TPAASASSMANSSAPSTATRRLTLSEANCHPGSATAAEKAEKSKKKALRRI	--	
T.cruzi	191	SEGFVSSQLRNASESALNKRSVAVSGTSTNVVASKKAVEKKRAALKRRI	-----	
Arabidopsis_tha		-----		
Homo_sapiens		-----		
Xenopus_laevis		-----		
Oryctolagus_cun		-----		
Crithidia_fasci	191	SRLTPSEANCHPGSAAAADKVEKSKKEAEKSKKKALRRI	-----	
Drosophila_mela		-----		
Mesocricetus_au		-----		

Figure S1. Comparative alignment of the primary structure of the LiUBC1 protein. The degree of conservation is represented in gray scale both in species of the trypanosomatid family and in different eukaryotes.

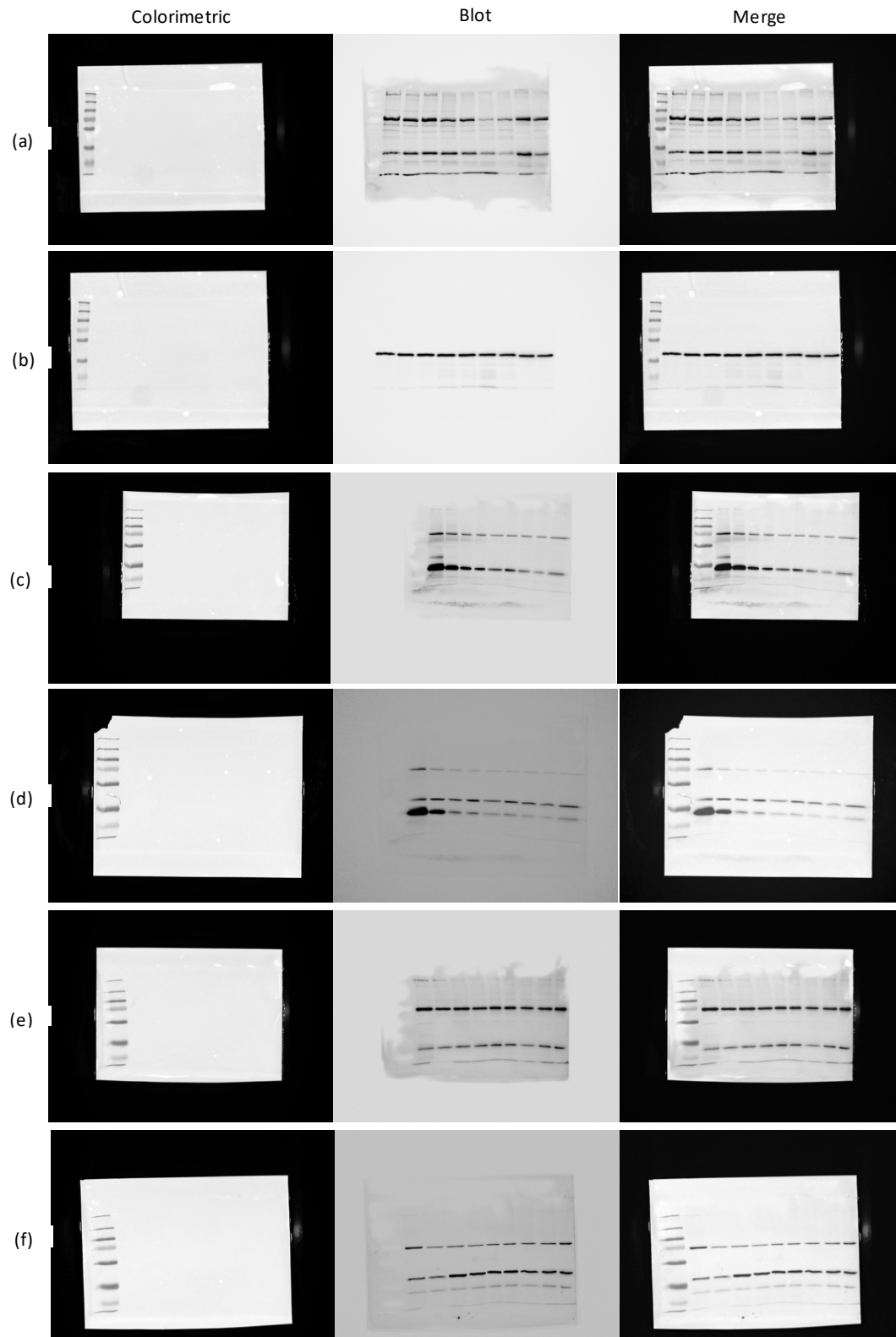


Figure S2. Raw Western Blot Images. Densitometry readings are in supplementary materials. **(a)** LiUBC1 expression pattern corresponding Figure 4(b) **(b)** LiUBC1 expression pattern antiGAPDH corresponding Figure 4(b) **(c)** Western blot pattern of the LiUBC1 protein throughout growth of pIRmcs3 control transfectants corresponding to Figure 7(b) **(d)** Western blot pattern of the LiUBC1 protein throughout growth of pIRmcs3 control transfectants antiGAPDH corresponding to Figure 7(b) **(e)** pIRmcs3-LiUBC1 knock-in promastigotes corresponding to Figure 7(c) **(f)** pIRmcs3-LiUBC1 knock-in promastigotes antiGAPDH corresponding to Figure 7(c).