ANEXO TFG

Implicated Microbiota[a]	Changes in Microbiota Presence/Function	References[b]
Allergies		
Lactobacillus spp. ↓	early colonization with *Lactobacillus* associated w/decreased allergies	Round et al., 2011
Bifidobacterium adolescentis ↓	early colonization with more diverse microbiota might prevent allergies	Round and Mazmanian, 2009
Clostridium difficile ↓		
Helicobacter pylori ↓	*H. pylori* tolerance mediated by Tregs that suppress asthma	Arnold et al., 2011
Celiac's disease		
Bacteroides vulgatus ↑	higher diversity (Shannon-Wiener index) in Celiac's disease patients versus controls	Elinav et al., 2011
Escherichia coli ↓		
Clostridium coccoides ↓		
Gastric Cancer		
H. pylori ↑	important element in carcinogenic pathway for developing gastric adenocarcinomas	Lathrop et al., 2011
Austim		
Bacteroidetes ↑	increased bacterial diversity in feces of autistic children compared to controls	Robinson et al., 2010
Proteobacteria ↑		
Actinobacteria ↓		
Firmicutes ↓		
Obesity		
Bacteroidetes ↓	significant changes in gut microbiota are associated with increasing obesity	Ley et al., 2005; Pflughoeft and Versalovic, 2011
Lactobacillus ↑		
Firmicutes/Bacteroidetes ratio ↓		Ley et al., 2005
Methanobrevibacter smithii ↓		Turnbaugh et al., 2009b
Anorexia		
Methanobrevibacter smithii ↑	Bacteroidetes, Firmicutes, and Lactobacillus similar to lean patients, though *M. smithii* significantly increased	Armougom et al., 2009; Pflughoeft and Versalovic, 2011
IBD—Crohn's Disease		
Bacteroides ovatus ↑	less diversity in patients with Crohn's disease compared to healthy patients	Dicksved et al., 2008
Bacteroides vulgatus ↑		
Bacteroides uniformis ↓		
IBD (General)		
Bacteroidetes ↓	IBD associated with overall community dysbiosis rather than single causal bacterial species	Spor et al., 2011; Perry et al., 2006
Lachnospiraceae ↓		
Actinobacteria ↑		
Proteobacteria ↑		
Clostridium leptum ↓		
Clostridium coccoides ↓		
Faecalibacterium prasnitzii ↓		
Firmicutes/Bacteroidetes ratio ↓		
Bifidobacteria ↓		
Type 2 Diabetes		
Firmicutes ↓	shifts in gut microbiota associated with increases in plasma glucose concentrations	Brown, 2000
Clostridia ↓		
Bacteroides-Prevotella ↑ versus *Clostridia coccoides-Eubacterium rectale* ↓		
Betaproteobacteria ↑		
Bacteroidetes/Firmicutes ratio ↑		

[a]Changes relative to healthy subjects. Increase: ↑. Decrease: ↓.
[b]References are exemplary rather than exhaustive and focus on studies that compare healthy versus diseased individuals.

Figura S1: Cambios en la microbiota intestinal asociados a distintas enfermedades (Clemente et al., 2012)

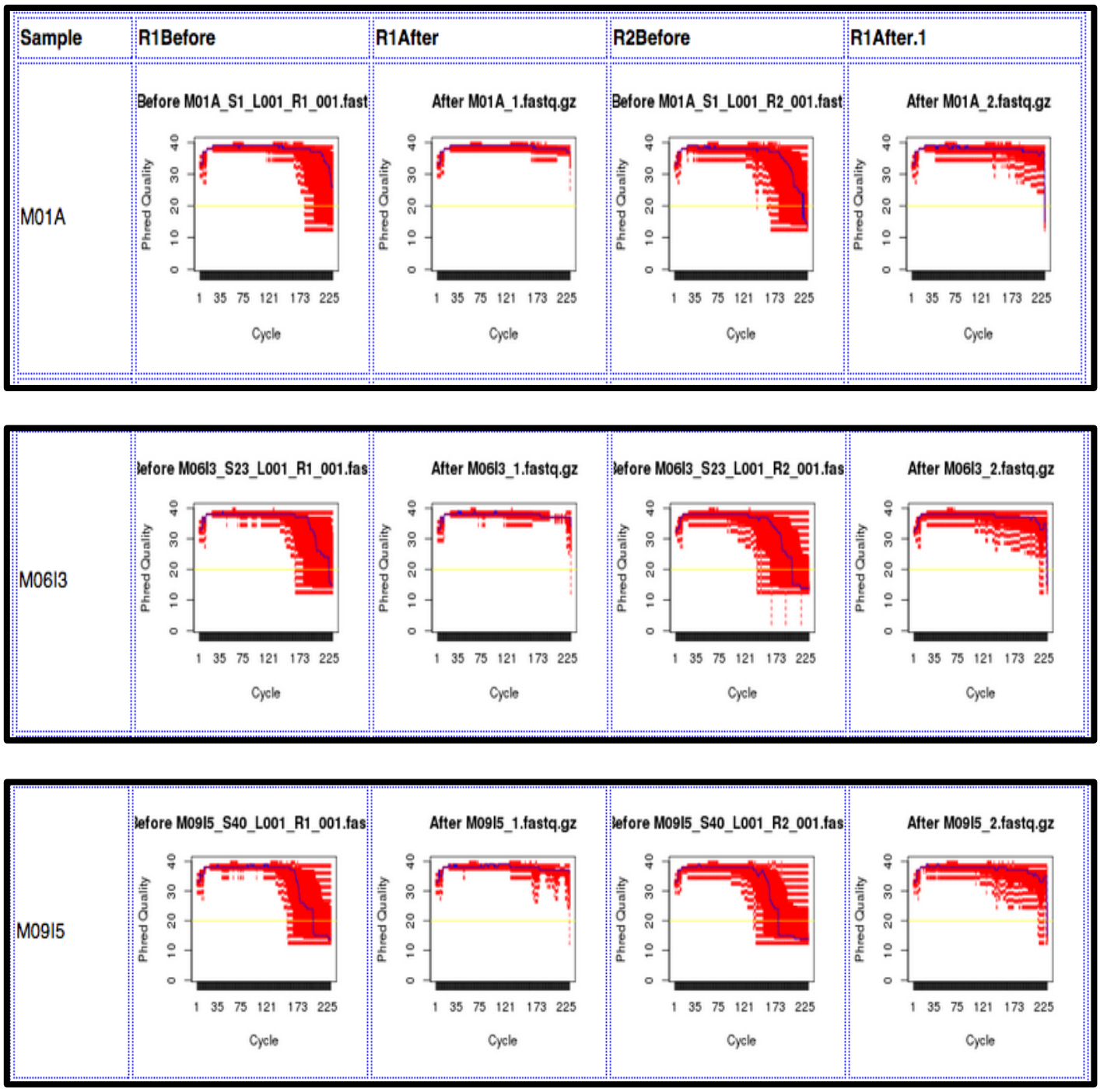

Figura S2: Distribución de la calidad por ciclo del secuenciador de algunas muestras antes y después de la evaluación cualitativa

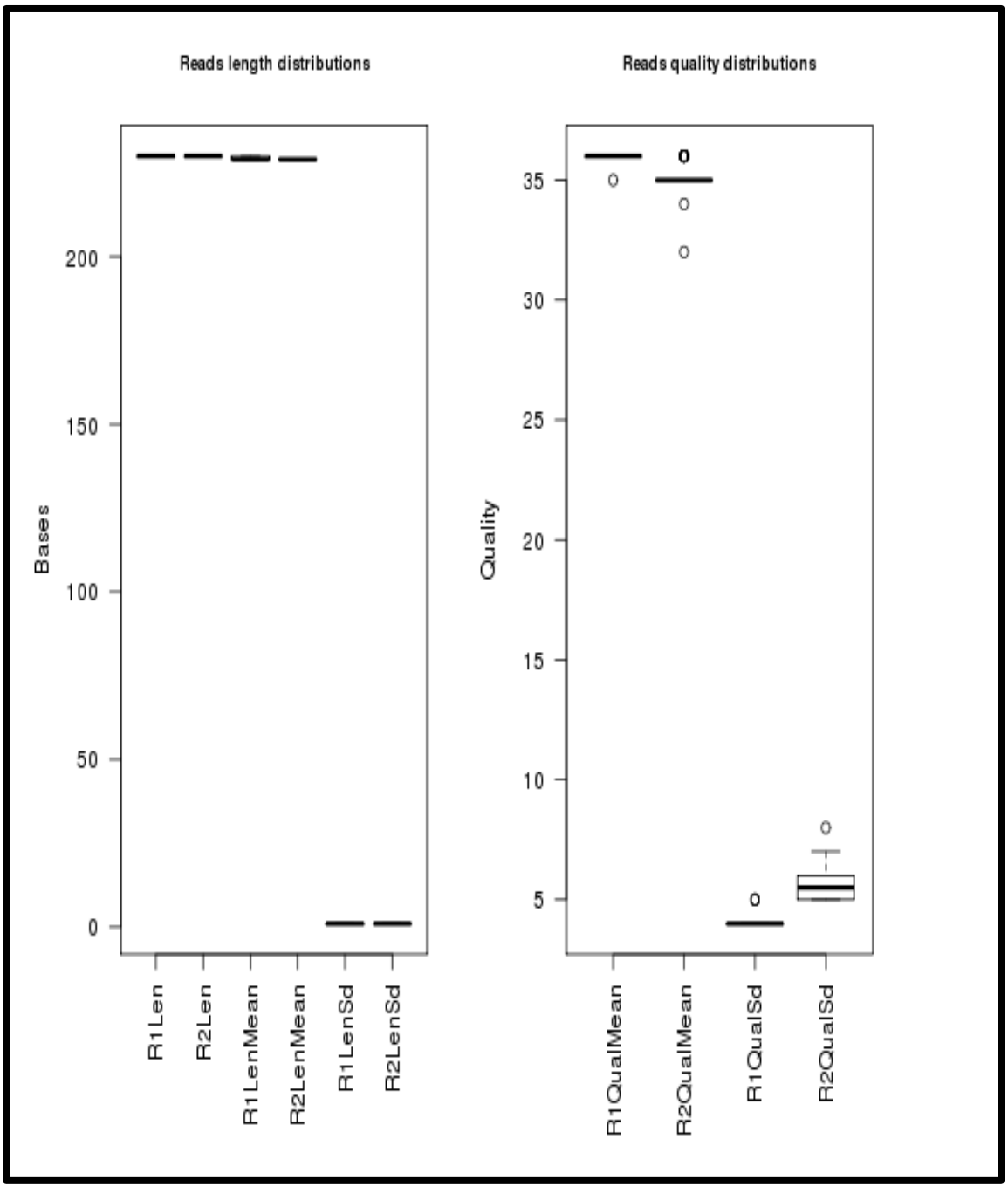

Figura S3: Distribución de la longitud (izquierda) y calidad (derecha) de los *reads* antes del *joining*.

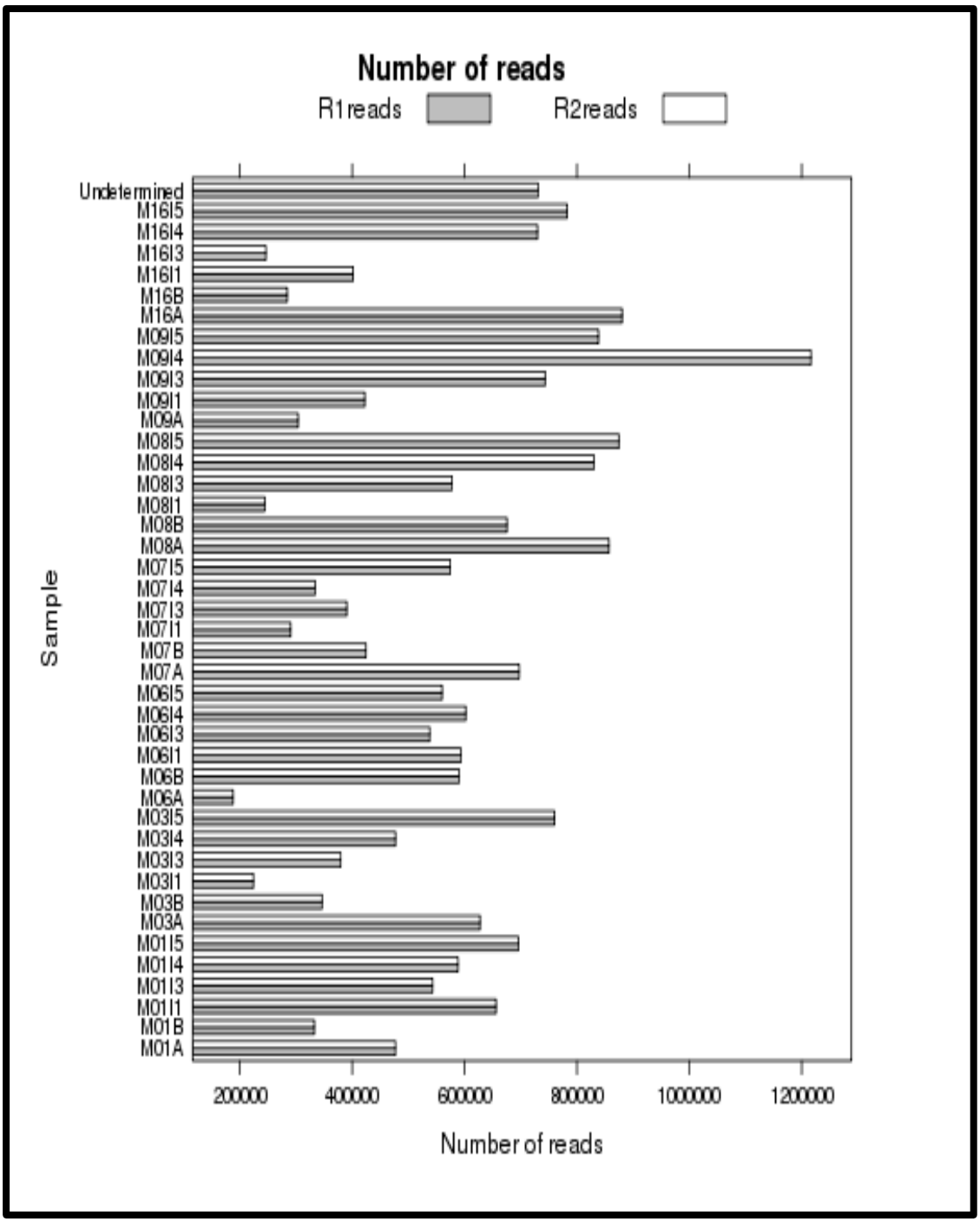

Figura S4: Número de reads (R1 y R2) obtenidos por muestra.

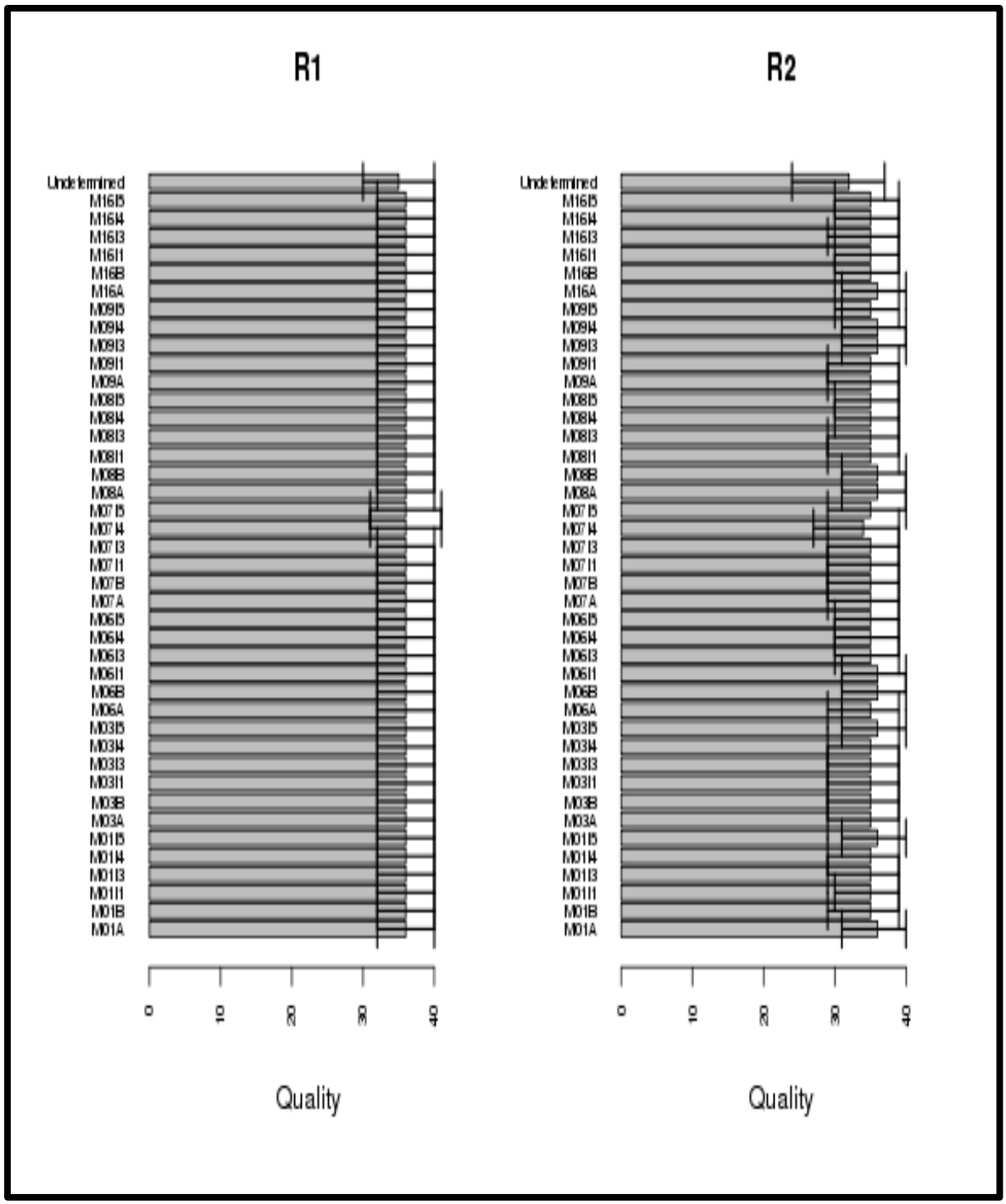

Figura S5: Distribución de las calidades antes de la evaluación cualitativa.

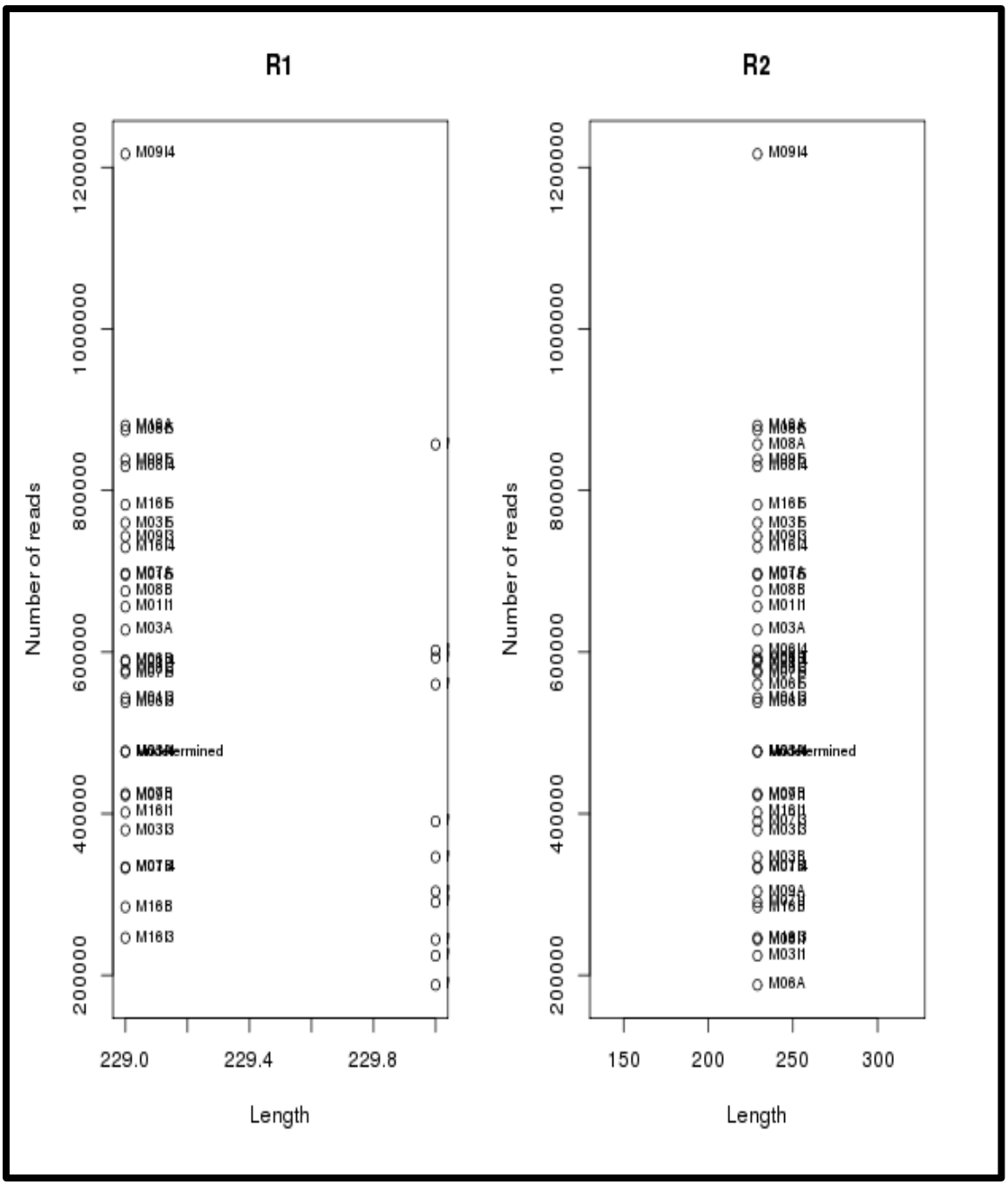

Figura S6: Distribución de la longitud media de los *reads* frente al número de *reads* por muestra. Nótese que para los R1 el nombre de algunas muestras no está visible debido a un error gráfico.

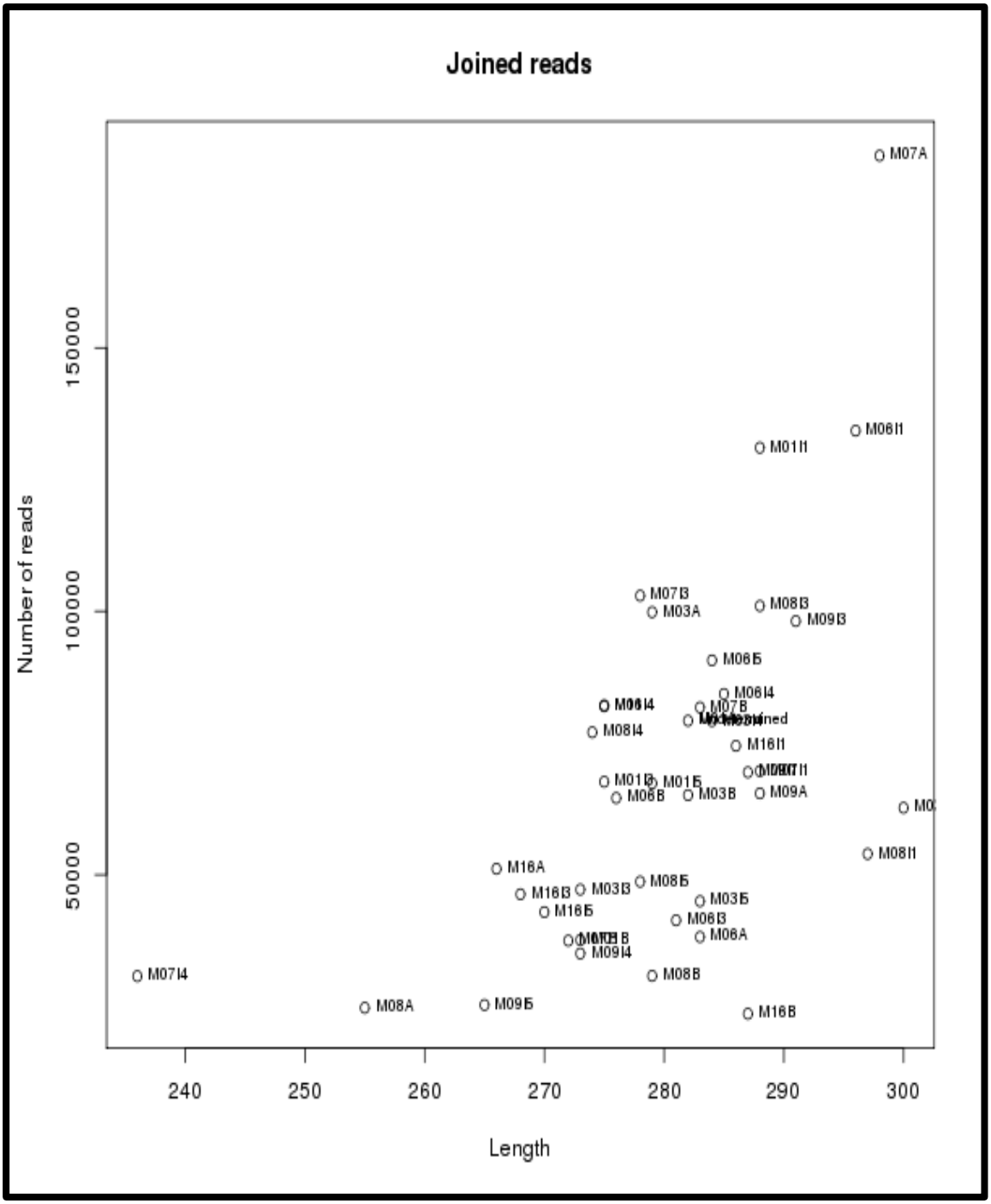

Figura S7: Distribución de la longitud promedio de los *read*s después del *joining*

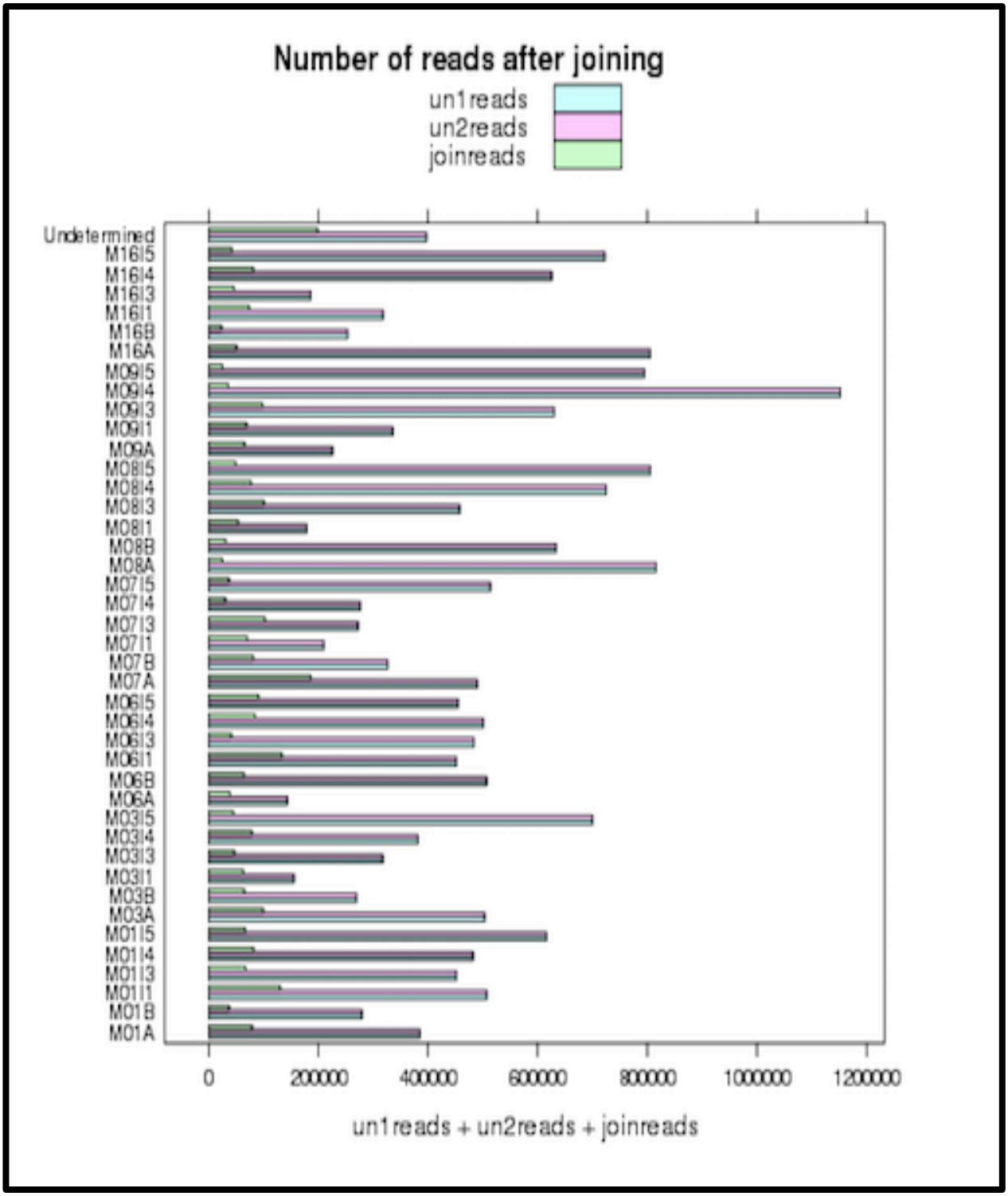

Figura S8: Número de *reads* unidos (*joined*) y no unidos (*unjoined*) por muestra.

Tabla S1: Número de *reads* por muestra con sus longitud y desviación estándar medias.

Sample	*R1 reads*	R1Len Mean	R1Len Sd	R2 *reads*	R2LenMean	R2LenSd
M01A	476914	229	1	476914	229	1
M01B	332618	229	1	332618	229	1
M01I1	656051	229	1	656051	229	1
M01I3	543191	229	1	543191	229	1
M01I4	588320	229	1	588320	229	1
M01I5	695439	229	1	695439	229	1
M03A	627517	229	1	627517	229	1
M03B	346245	230	1	346245	229	1
M03I1	224180	230	1	224180	229	1
M03I3	379589	229	1	379589	229	1
M03I4	476951	229	1	476951	229	1
M03I5	759856	229	1	759856	229	1
M06A	187940	230	1	187940	229	1
M06B	589773	229	1	589773	229	1
M06I1	593029	230	1	593029	229	1
M06I3	537933	229	1	537933	229	1
M06I4	602054	230	1	602054	229	1
M06I5	560006	230	1	560006	229	1
M07A	697166	229	1	697166	229	1
M07B	424508	229	1	424508	229	1
M07I1	290469	230	1	290469	229	1
M07I3	390364	230	1	390364	229	1
M07I4	333711	229	1	333711	229	1
M07I5	574462	229	1	574462	229	1
M08A	856995	230	1	856995	229	1
M08B	675394	229	1	675394	229	1
M08I1	244098	230	1	244098	229	1
M08I3	577273	229	1	577273	229	1
M08I4	829869	229	1	829869	229	1
M08I5	874430	229	1	874430	229	1
M09A	303734	230	1	303734	229	1
M09I1	422439	229	1	422439	229	1
M09I3	743253	229	1	743253	229	1
M09I4	1216474	229	1	1216474	229	1
M09I5	838283	229	1	838283	229	1
M16A	880391	229	1	880391	229	1
M16B	284420	229	1	284420	229	1
M16I1	401509	229	1	401509	229	1
M16I3	246336	229	1	246336	229	1
M16I4	729737	229	1	729737	229	1
M16I5	782370	229	1	782370	229	1
Undetermined	730708	229	1	730708	229	1

Tabla S2: Resumen después del *joining*.

Muestra	joinreads	joinLenMean	joinLenSd	joinQualMean	joinQualSd
M01A	79227	282	61	36	4
M01B	37612	273	63	36	4
M01I1	131047	288	55	36	4
M01I3	67641	275	69	36	4
M01I4	82155	275	54	36	4
M01I5	67336	279	54	36	4
M03A	99836	279	61	36	4
M03B	65107	282	57	36	4
M03I1	62699	300	60	36	4
M03I3	47189	273	58	36	4
M03I4	79177	284	53	36	4
M03I5	44968	283	55	36	4
M06A	38190	283	57	36	4
M06B	64561	276	52	36	4
M06I1	134267	296	56	36	4
M06I3	41348	281	57	36	4
M06I4	84309	285	62	36	4
M06I5	90685	284	60	36	4
M07A	186468	298	58	36	4
M07B	81747	283	52	36	4
M07I1	69672	288	67	36	4
M07I3	102956	278	58	36	4
M07I4	30744	236	75	36	4
M07I5	37488	272	59	36	4
M08A	24739	255	63	36	4
M08B	30805	279	58	36	4
M08I1	53953	297	61	36	4
M08I3	101015	288	58	36	4
M08I4	77032	274	61	36	4
M08I5	48684	278	56	36	4
M09A	65433	288	63	36	4
M09I1	69438	287	59	36	4
M09I3	98138	291	62	36	4
M09I4	35055	273	61	36	4
M09I5	25288	265	60	36	4
M16A	51121	266	50	36	4
M16B	23604	287	59	36	4
M16I1	74461	286	54	36	4
M16I3	46304	268	67	36	4
M16I4	81967	275	51	36	4
M16I5	42912	270	56	36	4
Undetermined	198639	316	86	36	4

Tabla S3: *Reads* obtenidos tras la limpieza frente a los iniciales y el respectivo porcentaje de reducción.

Muestra	*Reads* iniciales	*Reads* después de la limpieza	Porcentaje de reducción
M01A	850547	825074	2,99%
M01B	596704	569342	4,59%
M01I1	1144827	1100887	3,84%
M01I3	972549	924015	4,99%
M01I4	1047021	966942	7,65%
M01I5	1299256	1196736	7,89%
M03A	1106354	1053944	4,74%
M03B	603721	575237	4,72%
M03I1	374261	359175	4,03%
M03I3	682335	642794	5,79%
M03I4	841705	799936	4,96%
M03I5	1444630	1294981	10,36%
M06A	324670	300057	7,58%
M06B	1078709	1041661	3,43%
M06I1	1038429	1016322	2,13%
M06I3	1009628	571335	43,41%
M06I4	1087355	1048910	3,54%
M06I5	1001241	971252	3,00%
M07A	1166470	919189	21,20%
M07B	735139	617230	16,04%
M07I1	488724	471374	3,55%
M07I3	648110	620653	4,24%
M07I4	585238	546109	6,69%
M07I5	1064730	1011217	5,03%
M08A	1656491	1597439	3,56%
M08B	1298255	1259829	2,96%
M08I1	411749	391484	4,92%
M08I3	1016871	975572	4,06%
M08I4	1527468	1440445	5,70%
M08I5	1658992	1598705	3,63%
M09A	517549	498314	3,72%
M09I1	740598	705846	4,69%
M09I3	1357624	1291901	4,84%
M09I4	2339701	2215858	5,29%
M09I5	1615364	1543828	4,43%
M16A	1663003	1571281	5,52%
M16B	530740	479513	9,65%
M16I1	710321	685069	3,56%
M16I3	418564	397009	5,15%
M16I4	1333723	1196168	10,31%
M16I5	1488422	1432609	3,75%

Tabla S4: Tipos de secuencias eliminados durante el procesamiento bioinformático.

Muestra	Ribosomales bacterianas	Ribosomales humanas	Ribosomales eucariotas	*Reads* humanas
M01A	2680	77	137	358
M01B	3653	245	921	289
M01I1	885	35	4	26
M01I3	4638	736	227	1222
M01I4	32381	2826	559	958
M01I5	68404	33	45	25
M03A	10237	99	148	299
M03B	6240	1360	144	863
M03I1	2234	66	21	775
M03I3	9727	61	17	227
M03I4	13022	119	226	277
M03I5	103159	108	85	15
M06A	11788	52	72	516
M06B	2702	122	109	100
M06I1	1060	37	20	61
M06I3	396780	3	12	2
M06I4	8401	47	23	274
M06I5	2545	39	10	154
M07A	167828	112	36806	86
M07B	84060	23	42	20
M07I1	3068	14	13	267
M07I3	3424	2525	159	391
M07I4	6001	56	21	324
M07I5	4233	161	84	103
M08A	6881	66	71	104
M08B	3414	22	36	23
M08I1	899	151	38	490
M08I3	3040	204	35	97
M08I4	30205	902	1269	707
M08I5	2939	185	113	42
M09A	1589	70	265	306
M09I1	3063	723	107	455
M09I3	24748	1	14	151
M09I4	42791	152	277	27
M09I5	14319	20	24	67
M16A	37056	55	99	53
M16B	30061	38	7	306
M16I1	2387	33	4	58
M16I3	3224	89	18	1015
M16I4	89235	785	95	178
M16I5	7049	58	109	68