

Coverage of group-specific probes

Coverage of the main prokaryotic lines of descent by group-specific, rRNA-targeted oligonucleotide probes. Sensitivity and specificity of the probes were determined by using the Arb "probe match" module on current Arb databases of almost complete 16S and 23S rRNA sequences.

This table was modified from:

Loy, A., Daims, H., and Wagner, M. 2002. Activated Sludge: Molecular techniques for determining community composition. pp. 26-43 in *The Encyclopedia of Environmental Microbiology*, (G. Bitton, ed.). Wiley, New York.

Probe	Sensitivity ^a (%)	Specificity ^b	Total coverage ^c (%)	Target group
ALF1b	37.6	1,105	84.7	<i>Alphaproteobacteria</i>
ALF968	76.6	132		
BET42a	92.6	22 ^d	92.6	<i>Betaproteobacteria</i>
GAM42a	90.8	45 ^d	90.8	<i>Gammaproteobacteria</i>
LGC354A	41.1	9	52.1	<i>Firmicutes</i> (Low G+C gram-positive bacteria)
LGC354B	29.1	7		
LGC354C	10.9	0		
CYA762	53.7	38	92.2	<i>Cyanobacteria</i>
CYA664	35.3	0		
CYA361	86.9	8		
CIV/V1342	6.2	5		
DHP1006	100	0	100	<i>Synergistes</i>
TM7905	100	2	100	TM7
GSB532	75	0	75	<i>Chlorobi</i>
CFB286	49.3	0	90.5	<i>Cytophagales</i>
CFB563	27.2	0		
CFB719	31.1	4		
CFB972	27.2	96		
CFB1082	39.2	2		
CF319	41.9	28		
BAC303	33.1	0		
Fibro	100	0		
Pla46	92.6	6	95.1	<i>Planctomycetes</i>
Pla886	82.7	2,561 ^d		
EUB338 II	75.3	1 ^{d,e}		
EUB338 III	70	31 ^{d,e}	70	<i>Verrucomicrobiales</i>
Ntspa712	85	0 ^d	85	<i>Nitrospira</i>
IRog1	38.4	1	44.2	<i>Acidobacteria</i>
IRog2	44.2	0		

HGC69A	82.5	10	82.5	<i>Actinobacteria</i> (High G+C gram-positive bacteria)
EUB338	90.4	0	91.8	domain <i>Bacteria</i>
EUB338 II	0.8	0		
EUB338 III	0.6	0		
CREN499	30.6	0	30.6	<i>Crenarchaeota</i>
EURY498	50	2	50	<i>Euryarchaeota</i>
Arch915	88.3	0	88.3	<i>Archaea</i>

^a The fraction of the sequences within the target group which have not more than 0.4 weighted mismatches to the probe sequence.

^b The number of non-target sequences which have up to 0.4 weighted mismatches to the probe sequence.

^c Total coverage of the target group by a combination of all listed probes which are specific for this group.

^d The probe specificity is improved by a competitor oligonucleotide as detailed in the publication cited.

^e The probe targets parts of the specified group and additional bacteria, because it belongs to the Bacteria-specific probe set.