

Table EV4. FISH probes list. For each probe, the supplier, labelling, denaturation and washing conditions are specified.

Locus	Sequence/supplier	Denaturation (T°C, time)	Washing (T°C,time)
Centromere 1	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 2	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 3	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 4	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 6	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 7	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 8	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 9	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 10	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 11	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 12	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 15	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 16	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 17	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 18	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 19	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 20	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere X	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere Y	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Chromosome paint 5	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Chromosome paint 19	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Chromosome paint X	Metasystems probes	75 °C, 2 min	72 °C, 2 min
5q31/5p15	Metasystems probes	75 °C, 2 min	72 °C, 2 min
Centromere 16	AmpliTech	75 °C, 2 min	72 °C, 2 min
CENP-B DNA binding site	PNA bio	75 °C, 2 min	72 °C, 2 min
Centromere 1/5/16/19 (aR34TG)	⁵ TgAaCgAtCcTtTaCaCa ³	85 °C, 3 min	65 °C, 5 min