

MODIFIED OLIGONUCLEOTIDES

CUSTOM SYNTHESIS

- ✓ over 20 years experience in modified oligo synthesis
- ✓ two options of the labeling:
during the oligo synthesis or post-synthetically
- ✓ labels are by our own production
- ✓ the price includes PAGE purification of each oligonucleotide, HPLC purification on request
- ✓ production time from 5 working days
- ✓ worldwide delivery, for bulk orders - for free
- ✓ the customer satisfaction guarantee:
oligos replacement in shortest terms in case of a claim

References of our scientists:

Dye	Max Abs (nm)	Max Em (nm)
FAM	494	520
R110	505	535
TET	521	536
JOE	520	548
HEX	535	556
R6G	530	560
By-3	546	563
TAMRA	556	588
By-3.5	588	604
ROX	585	605
By-5	646	662
By-5.5	683	707
By-7	750	770
By-7.5	780	800



Dabcyl $\lambda_{abs(max)}$: 453 nm QR: 390 - 510 nm
BHQ-1 $\lambda_{abs(max)}$: 534 nm QR: 480 - 580 nm
BHQ-2 $\lambda_{abs(max)}$: 579 nm QR: 559 - 670 nm
BHQ-3 $\lambda_{abs(max)}$: 672 nm QR: 620 - 730 nm

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2. D. Ryazantsev, D. Tsybulsky, I. Prokhorenko, M. Kvach, Y. Martynenko, P. Philipchenko, V. Shmanai, V. Korshun, S. Zavriev. Two-dye and one- or two-quencher DNA probes for real-time PCR assay: synthesis and comparison with a TaqMan™ probe. *Anal. Bioanal. Chem.*, 2012, V. 404, P. 5968.
3. M. Kvach, D. Tsybulsky, V. Shmanai, I. Prokhorenko, I. Stepanova, V. Korshun Non-Nucleoside Phosphoramidites of Xanthene Dyes (FAM, JOE, and TAMRA) for Oligonucleotide Labeling. *Current Protocols in Nucleic Acid Chemistry* 4.55.1-4.55.33, March 2013.
4. M.A. Fomich, M.V. Kvach, M.J. Navakouski, C. Weise, A.V. Baranovsky, V.A. Korshun, V.V. Shmanai. Azide Phosphoramidite in Direct Synthesis of Azide-Modified Oligonucleotides. *Org. Lett.* 2014, 16 (17), 45904593.



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Modification	5'	3'	Internal (dT)
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FAM	V	V	V
TET	V	V	-
JOE	V	V	V
HEX	V	V	V
R110	V	V	V
R6G	V	V	V
TAMRA	V	V	V
ROX	V	V	V
By-3 (Cy3 analogue)	V	V	V
By-3.5 (Cy3.5 analogue)	V	V	V
By-5 (Cy5 analogue)	V	V	V
By-5.5 (Cy5.5 analogue)	V	V	V

✓ FLUORESCENT
DIES

Dabcyl	-	V	-
BHQ-1	V	V	V
BHQ-2	V	V	V

✓ FLUORESCENCE
QUENCHERS

Biotin	V	V	V
Aminolink (-NH ₂)	V	V	-
Alkyne	V	V	V
Phosphate	V	V	-
Long Trebler	V	-	-

✓ OTHER
GROUPS

