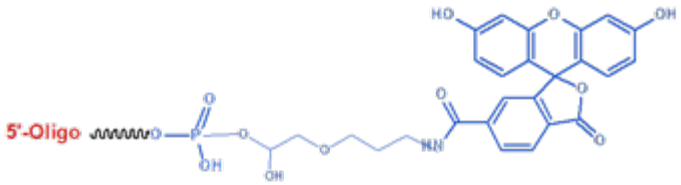
Fam (6-FAM)-3'

Category	Fluorescent Dyes
Modification Code	Fam-3
Reference Catalog Number	26-6516
5 Prime	N
3 Prime	Y
Internal	N
Molecular Weight(mw)	569.45



6-Fam-3' (6-fluorescein amidite-3')
[26-6516-XX]

6-carboxyfluorescein (6-FAM) is the most commonly used fluorescent dye for labeling oligonucleotides. 6-FAM is reactive, water-soluble, and has an absorbance maximum of 492 nm and an emission maximum of 517 nm. 6-FAM plays a particularly important role in real-time PCR applications, being used as a reporter moiety in TaqMan probes (1), Scorpion primers (2) and Molecular Beacons (3). For such probes, 6-FAM is most commonly paired with the dark quencher BHQ-1, as the two have excellent spectral overlap. 6-FAM-labeled primers have also been used for bacterial SNP genotyping by allele-specific real-time PCR (4).

6-FAM can be used to label DNA oligos for use as hybridization probes in a variety of in vivo and in vitro research or diagnostic applications, as well as for structure-function studies of DNA, RNA, and protein-oligonucleotide complexes. Oligos labeled with 6-FAM at the 5'-end can be used as PCR and DNA sequencing primers to generate fluorescently-labeled PCR, sequencing or genetic analysis (AFLP or microsatellite) products. **References**

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2. Thelwell, N., Millington, S., Solinas, A., Booth, J., Brown, T. Mode of action and application of Scorpion primers to mutation detection. *Nucleic Acids Res.* (2000), **28**: 3752-3761.
3. Tyagi, S., Kramer, F.R. Molecular beacons: probes that fluoresce upon hybridization. *Nat. Biotechnol.* (1996), **14**: 303-308.
4. Huygens, F., Inman-Bamber, J., Nimmo-G.R., Munckhof, W., Schooneveldt, J., Harrison, B., McMahon, J.A., Giffard, P.M. Staphylococcus aureus Genotyping Using Novel Real-Time PCR Formats. *J. Clin. Microbiol.* (2006), **44**: 3712-3718.