Coumarin Azide is a fluorescent dye containing a terminal azide group. Coumarin is also known as umbelliferone. Coumarin is highly fluorescent and pH-sensitive, with an absorbance maximum of 358 nm and an emission maximum of 480 nm; thus it emits in the blue region of the visible spectrum. The presence of the azide allows the user to use “Click Chemistry” (a [3+2] cycloaddition reaction between alkynes and azides, using copper (I) iodide as a catalyst) to conjugate the Coumarin-Azide to a terminal alkyne-modified oligo with extremely high regioselectivity and efficiency (1,2). Preparation of the alkyne-modified oligo can be achieved using the 5'-Hexynyl modifier (see its respective tech sheet for details). Because coumarin is effectively quenched if its hydroxyl group is either alkylated or phosphorylated, it is useful in high-throughput screening for enzyme lipases and phosphatases.

References