THE TECHNOLOGY

RNA has complex roles in cellular functions, but an approach for fluorescently tagging RNA is lacking. This technology has developed RNA sequences (RNA aptamer) which exhibit fluorescence upon binding a fluorophore. Cellular RNA can be tagged with the RNA aptamer and fluoresce upon binding of the fluorophore. Additional RNA aptamers have been developed to bind cellular metabolites. This technology enables imaging of RNA and cellular metabolite both in vivo and in vitro.

THE PRODUCTS

3,5-difluoro-4-hydroxybenzylidene imidazolinone

3,5-difluoro-4-hydroxybenzylidene imidazolinone (DFHBI) is a small molecule fluorophore. Upon binding to its aptamer, this molecule exhibits the spectral properties of enhanced green fluorescent protein (EGFP).