[Document Name] Claims

[Claim 1]

A compound, having:

(i) a plurality of photocleavable moieties; and a spacer arm, wherein some or all of the plurality of photocleavable moieties are bound via the spacer arm; and

(ii) a target substance binding site which is an enzyme recognition site and an anchor binding site which binds to the anchor,

wherein the compound is used to select a peptide compound having binding selectivity for a target substance from a peptide compound library,

wherein the photocleavable moiety/moieties has/have a nitroveratryloxycarbonyl residue or a coumarin residue.

[Claim 2]

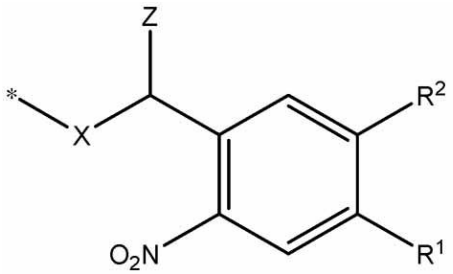
The compound according to claim 1, wherein the target substance binding site is recognized by at least one selected from the group consisting of ligases and proteases.

[Claim 3]

The compound according to any one of claims 1 to 2, wherein the absorption wavelength at which the photocleavable moiety/moieties undergo(es) cleavage is in the range of 300 nm or more and 500 nm or less.

[Claim 4]

The compound according to any one of claims 1 to 3, wherein the photocleavable moiety has a structure represented by the following formula (1):



(1)

wherein

X represents O or NH;

Z represents a hydrogen atom or a C1-6 alkyl group;

R^1 represents -O-L^{11}-L^{12}-*, a C1-10 alkoxy group, or a hydrogen atom;

R^2 represents -O-L^{11}-L^{12}-* or a C1-10 alkoxy group;

L^{11} represents a C1-10 alkylene group;

L^{12} represents a divalent group selected from the group consisting of a single bond, a C1-10 alkylene group, an amide bond, an ether bond, and combinations thereof;

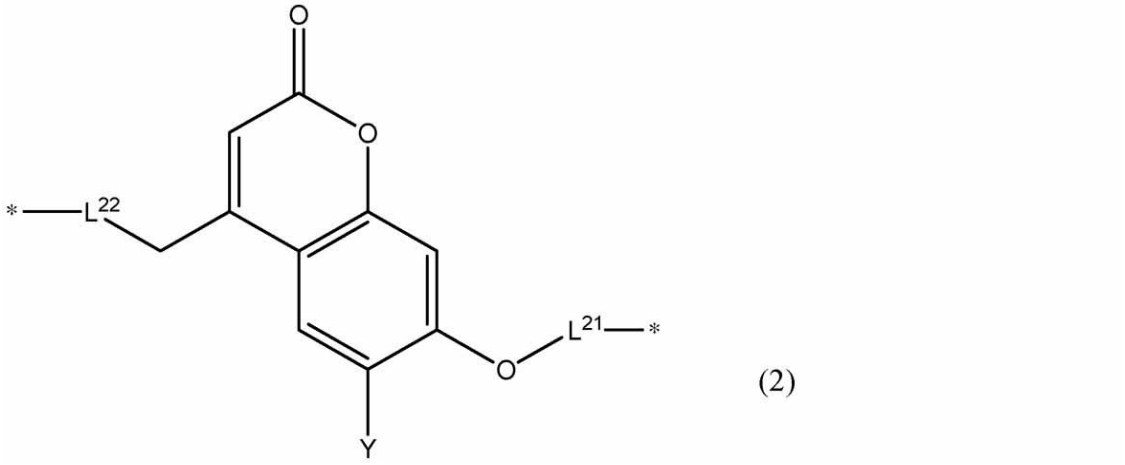
any one of R^1 and R^2 is -O-L^{11}-L^{12}-*; and

* represents a bond.

[Claim 5]

The compound according to any one of claims 1 to 4, wherein the photocleavable moiety has a structure represented by the following formula (2):

[Formula 2]



(2)

wherein

Y represents a hydrogen atom or halogen atom;

L^{21} and L^{22} each independently represent a divalent group selected from the group consisting of a single bond, a C1-10 alkylene group, an amide bond, an ether bond, and combinations thereof; and

* represents a bond.

[Claim 6]

The compound according to any one of claims 1 to 5, wherein the spacer arm comprises an oxyethylene group, an amino acid residue, or a substituted or unsubstituted alkylene group.

[Claim 7]

The compound according to any one of claims 1 to 6, wherein the anchor binding site is a biotin tag.

[Claim 8]

A method for selecting a substance of interest capable of binding to a target substance, comprising:

a contacting step of bringing a library of nucleic acids or compounds linked to nucleic acids into contact with the compound according to any one of claims 1 – 7, and

an elution step of irradiating the conjugate with light to obtain the substance of interest;

wherein the substance of interest is a compound linked to a polynucleotide and the

compound linked to the polynucleotide is identified by determining the nucleotide sequence of the polynucleotide encoding the substance of interest.

[Claim 9]

The method according to claim 8, wherein the wavelength of the light is 300 nm or more and 500 nm or less.

[Claim 10]

The method according to claim 8 or 9, wherein the illuminance of the light is 10 mW/cm^2 or more and 600 mW/cm^2 or less.

[Claim 11]

The method according to any one of claims 8 to 10, wherein the irradiation time of the light is 0.5 minutes or more and 60 minutes or less.