

Retargeting of HER2 receptor mediated Adenoviral vectors : Adenovirus-Poly(Ethylene Glycol)-Herceptin conjugate

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To overcome the immune responses associated with Adenoviral vector, the surface of adenovirus (ADV) was modified with bifunctional poly(ethylene glycol) (PEG). And then, the surface of ADV-PEG derivatives was modified with Herceptin (Trastuzumab ; HER) again. The ADV coding the green fluorescent protein (GFP) gene was used to immobilize PEG or HER-PEG conjugate on the viral surface to comparatively evaluate their extents of retargeting, as compared to those of naked ADV. The ADV-PEG-HER showed a remarkably enhanced level of GFP expression than unmodified ADV or ADV-PEG for a HER2 receptor overexpressing cell line, but not for a HER2 receptor deficient several cell line.

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