Eradication Of Human Cancer Cells By Antigen Specific Delivery Of Carbon Monxide With A Family Photoactivatable Antibobody Photocorm Conjugates

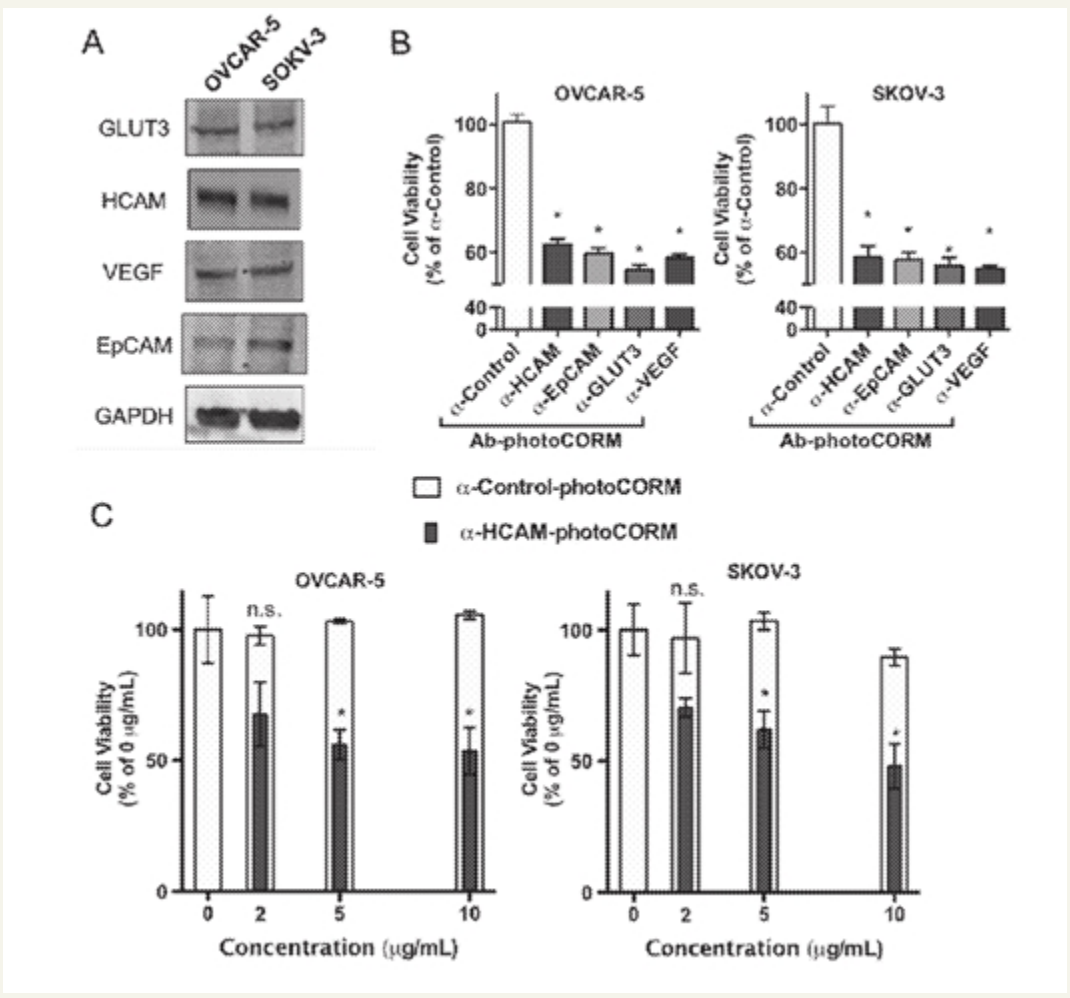
Tech ID: 32831 / UC Case 2019-974-0

BACKGROUND

PhotoCORMs are compounds that release Carbon monoxide (CO) upon exposure to light. CO released from photoCORMs exposed to light is known to cause apoptotic cell death and can sensitize human cancer cells to chemotherapeutics. Drug resistance is often encountered in cancer chemotherapy. In addition, efforts to minimize toxicity from chemotherapy have met with little success. A UC Santa Cruz researcher has developed a system to specifically deliver photoCORMs to tumors and presensitize those tumors to conventional chemotherapy

TECHNOLOGY DESCRIPTION

The invention involves an an antibody-based, targeted treatment that precisely targets CO to tumors to increase efficacy in chemotherapeutics with no toxic effects. Ab-photoCORMS, deliver cytotoxic levels of CO to ovarian cancer after exposure to low visible light in sufficient quantities to affect cell viability. Effects are seen after a 24 hour incubation.



APPLICATIONS

Antibody targeted cancer therapy

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OTHER INFORMATION

KEYWORDS

Carbon monoxide, Carbon monoxide releasing molecules (CORMs), Antibody-drug conjugates, photoCORMs, Cancer therapeutics, Targeted therapy

CATEGORIZED AS

- **Medical**
  - Disease: Cancer
  - Therapeutics

RELATED CASES

2019-974-0

ADVANTAGES

- CO pretreatment potentially results in lower dose chemotherapy
- Targeted CO results in greater effectiveness

INTELLECTUAL PROPERTY INFORMATION

Country	Type	Number	Dated	Case
United States Of America	Published Application	20210060167	03/04/2021	2019-974

RELATED MATERIALS

- Diminished viability of human ovarian cancer cells by antigen-specific delivery of carbon monoxide with a family of photoactivatable antibody-photoCORM conjugates - 11/20/2019

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