

# A novel therapeutic target Vasohibin-2 For the treatment of refractory cancers including pancreatic cancer

## Overview

Vasohibin-2 (referred to as VASH2) knockdown significantly reduced metastasis of pancreatic cancer cells (Fig. 1) and prolonged survival period after orthotopic transplantation (Fig.2). The mechanisms of action are;

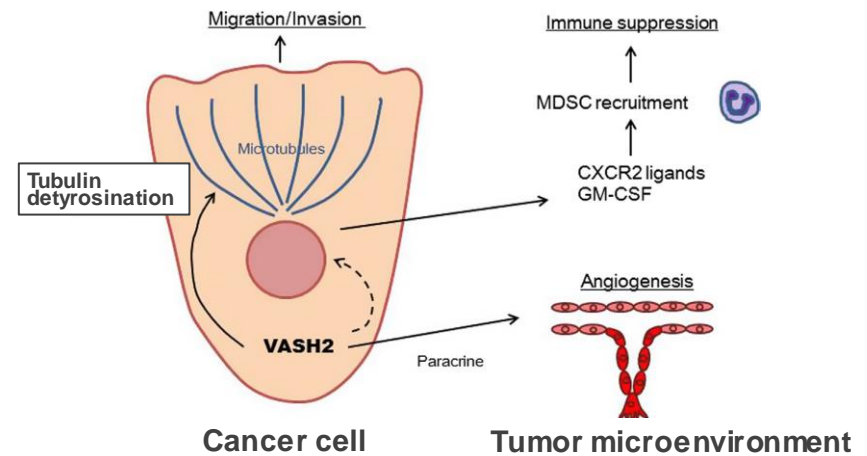
- (1)VASH2 knockdown reduces cancer cell invasion through suppressing of tubulin carboxypeptidase activity within the cell.
- (2) VASH2 secreted by cancer cells stimulates tumor angiogenesis, so when VASH2 was knocked down, tumor angiogenesis was prevented.
- (3) VASH2 regulates the production of inflammatory chemokines and cytokines in cancer cells, which in turn, accelerates the recruitment of MDSC and TAM and prevents the infiltration of cytotoxic T lymphocytes. The inhibition of VASH2 eliminates immune suppression in pancreatic cancer.

## Product Application

- Antibody drug or peptide vaccine targeting VASH2 for the treatment of cancer which highly express VASH-2. (e.g. pancreatic/ovarian/esophageal cancer)

## IP Data

IP No. : WO2019/045025 WO2014/087810  
 Inventor : SATO Yasufumi  
 Admin No. : T18-447(Vaccine Composition), T12-072(Antibody)



## Inhibition of Vasohibin-2 expression

Ref. [1]

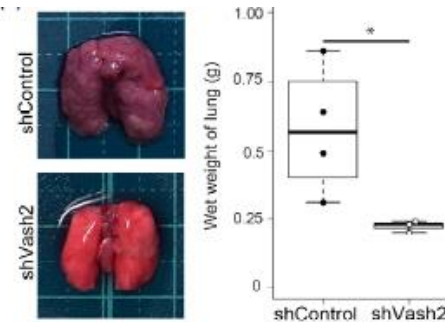


Fig.1  
Reduced cancer cell migration

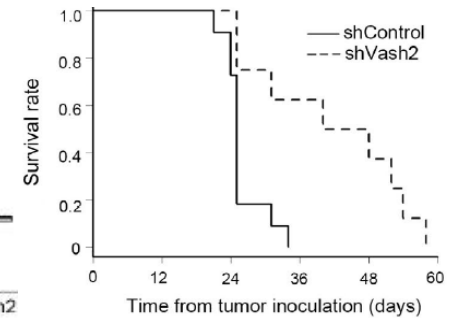


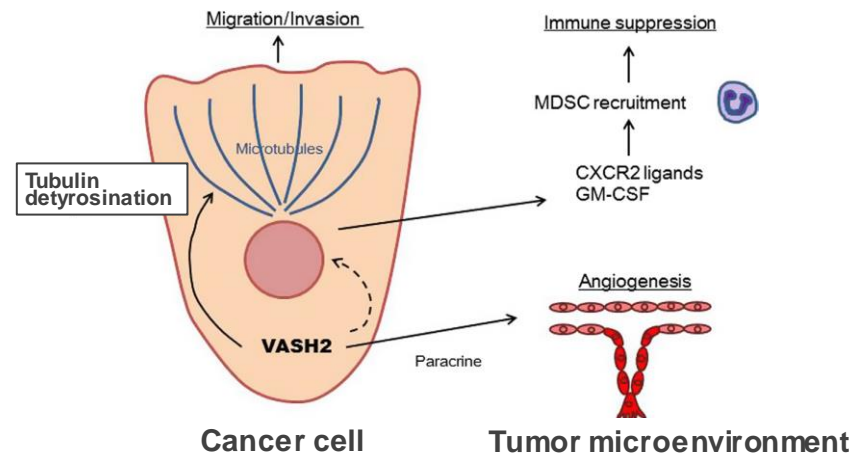
Fig.2  
Prolonged survival period

## Related Works

[1] Iida - Norita R, Kawamura M, Suzuki Y, et al. Vasohibin - 2 plays an essential role in metastasis of pancreatic ductal adenocarcinoma. *Cancer Sci.* 2019;110:2296–2308.

## Contact

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Ref. [1]

## Anti-Vasohibin-2 antibody comparison with bevacizumab

Fig.1 Anti-tumor effect  
i.p. twice/week

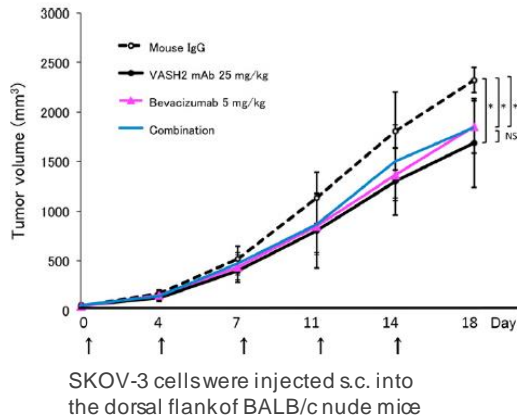
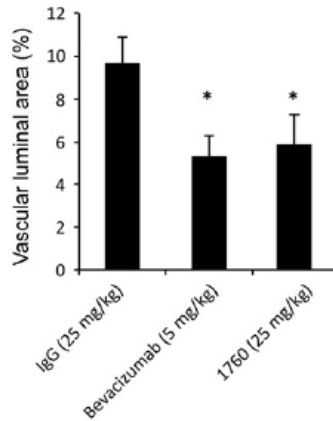


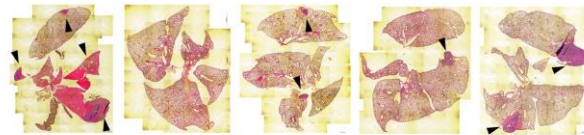
Fig.2 Anti-angiogenic effect  
i.p. twice/week for 3 weeks



## Peptide Vaccine Ref. [WO2019/045025]

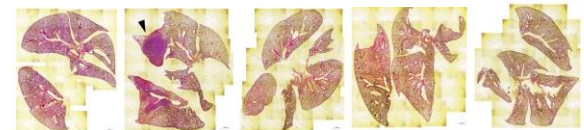
Control (KLH 20 µg)

Lung Metastasis



4/5

Peptide Vaccine (MTG 20 µg)



1/5

\* After medication with Freund's Adjuvant, i. v. of Lewis pancreatic cancer cells.

Fig.3  
Cancer metastasis to lung was suppressed.

## Product Application

- Recurrence prevention of VASH2 high expression cancer
- VASH2 high expression cancer metastasis inhibitor

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## Related Works

[1] Koyanagi T, Suzuki Y, Komori K, et al. Targeting human vasohibin-2 by a neutralizing monoclonal antibody for anti-cancer treatment. Cancer Sci. 2017;108:512–519.

## Contact

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