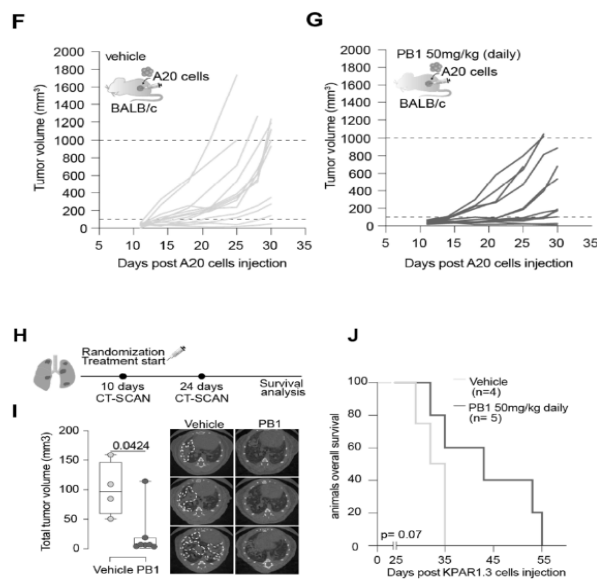


# Inhibition of 17 $\beta$ -hydroxysteroid dehydrogenase proteins to enhance immune responses



Ref. Nr

6.2689

Keywords

HSD17B proteins; inhibition; oncology, immune stimulation

Intellectual Property

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## Description

Screen of more than 7000 small molecules, identification of PB1 as an inhibitor of the 17 $\beta$ -hydroxysteroid dehydrogenase (HSD17B) family of proteins. Multiple in vivo studies using different murine models to show that the inhibitor successfully delays tumor growth and improve survival by activating the immune system. In addition, we have shown that this therapeutic strategy is well tolerated by the animal

Pharmacological or genetic inhibition of HSD17B proteins modulate the cell's lipid composition, which in turn alters the plasma membrane organization, affects several surface receptors, and enhance cancer cell phagocytosis. Targeting HSD17B proteins activates not only macrophages but also other immune cells, increasing inflammation and limiting tumor growth.

Thus, the HSD17B proteins are essential for maintaining cell cell communications,

and their inhibition induces immune cell activation, opening the possibility of exploiting this mechanism to enhance immune cell activation in cancer and other diseases.

## Advantages / Applications

PB1 can be used as individual agent or in combination with other therapies in cancer and other diseases.

Tested in two tumor models and in combination with immunotherapies

Can stimulate immunity in the context of infectious disease