

[Open Peer Review on Qeios](#)

Therapeutic Angiotensin-(1-7)

National Cancer Institute

Source

National Cancer Institute. *Therapeutic Angiotensin-(1-7)*. NCI Thesaurus. Code C68962.

A synthetic heptapeptide identical to endogenous angiotensin-(1-7) with vasodilator and antiproliferative activities. Therapeutic angiotensin 1-7 may inhibit cyclooxygenase 2 (COX-2) and the production of proinflammatory prostaglandins and may activate the angiotensin-(1-7) receptor Mas, resulting in diminished tumor cell proliferation. Activation of the angiotensin-(1-7) receptor Mas, a G-protein coupled, seven transmembrane protein, may down-regulate the phosphorylation and activation of Erk1 and Erk2 in the Erk1/Erk2 MAPK signaling pathway. In the renin-angiotensin system, the vasodilating activity of angiotensin- (1-7), hydrolysed from angiotensin II by the type I transmembrane metallopeptidase and carboxypeptidase angiotensin converting enzyme 2 (ACE2) in vivo, counteracts the vasoconstricting activity of angiotensin II.