Angiomotin

Angiomotin (AMOT) is a protein that in humans is encoded by the AMOT gene. It belongs to the motin family of angiostatin binding proteins, which includes angiomotin, angiomotin-like 1 (AMOTL1) and angiomotin-like 2 (AMOTL2) characterized by coiled-coil domains at N-terminus and consensus PDZ-binding domain at the C-terminus.

Angiomotin is expressed predominantly in endothelial cells of capillaries as well as angiogenic tissues such as placenta and solid tumor.

Lin et al., integrated functional proteomics with lncRNA-interactome profiling to characterize Urothelial Cancer Associated 1 (UCA1), a candidate driver of ovarian cancer development. Reverse phase protein array (RPPA) analysis indicates that UCA1 activates transcription coactivator YAP and its target genes. In vivo RNA antisense purification (iRAP) of UCA1 interacting proteins identified angiomotin (AMOT), a known YAP regulator, as a direct binding partner. Loss-of-function experiments show that AMOT mediates YAP activation by UCA1, as UCA1 enhances the AMOT-YAP interaction to promote YAP dephosphorylation and nuclear translocation. Together, we characterize UCA1 as a lncRNA regulator of Hippo-YAP signaling and highlight the UCA1-AMOT-YAP signaling axis in ovarian cancer development [1)].

1)
Lin X, Spindler TJ, de Souza Fonseca MA, Corona RI, Seo JH, Dezem FS, Li L, Lee JM, Long HW, Sellers TA, Karlan BY, Noushmehr H, Freedman ML, Gayther SA, Lawrenson K. Super-Enhancer-Associated LncRNA UCA1 Interacts Directly with AMOT to Activate YAP Target Genes in Epithelial Ovarian Cancer. iScience. 2019 Jun 20;17:242-255. doi: 10.1016/j.isci.2019.06.025. [Epub ahead of print] PubMed PMID: 31307004.