Krüppel-like Factor 2 (KLF2), also known as lung Krüppel-like Factor (LKLF), is a protein that in humans is encoded by the KLF2 gene on chromosome 19.

It is a member of the Krüppel-like factor family of zinc finger transcription factors, and it has been implicated in a variety of biochemical processes in the human body, including lung development, embryonic erythropoiesis, epithelial integrity, T-cell viability, and adipogenesis.

Cerebral Cavernous Malformation CCMs arise due to loss of function in one of the genes that encode the CCM complex, a negative regulator of MEKK3-KLF2/4 signaling in vascular endothelial cells. Gain-of-function mutations in PIK3CA (encoding the enzymatic subunit of the PI3K (phosphoinositide 3-kinase) pathway associated with cell growth) synergize with CCM gene loss-of-function to generate rapidly growing lesions [1].

1)
Li L, Ren AA, Gao S, Su YS, Yang J, Bockman J, Mericko-Ishizuka P, Griffin J, Shenkar R, Alcazar R, Moore T, Lightle R, DeBiasse D, Awad IA, Marchuk DA, Kahn ML, Burkhardt JK. mTORC1 Inhibitor Rapamycin Inhibits Growth of Cerebral Cavernous Malformation in Adult Mice. Stroke. 2023 Sep 25. doi: 10.1161/STROKEAHA.123.044108. Epub ahead of print. PMID: 37746705.