

New role for Emerin, a key inner nuclear membrane protein, as an enhancer of the autophagosome formation in the C16-ceramide autophagy pathway.

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Abstract: To date, precise roles of EMD remain poorly described. In this paper, we investigate the role of EMD in the C16-ceramide autophagy pathway. Ceramides are bioactive signalling molecules acting notably in the regulation of cell growth, differentiation or cell death. However, the mechanisms by which they mediate these pathways are not fully understood. We found that C16-ceramide induces EMD phosphorylation on its LEM domain through PRKACA. Upon ceramide treatment, phosphorylated EMD binds LC3 leading to an increase of the autophagosomes formation. These data suggest a new role of EMD as an enhancer of autophagosomes formation in the C16-ceramide autophagy pathway in colon cancer cells.