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Piperine potentiates curcumin-mediated repression of mTORC1 signaling in human intestinal epithelial cells: implications for the inhibition of protein synthesis and TNF α signaling

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Abbreviations

Akt, AKT serine/threonine kinase 1
BCA, bicinechonic acid
BRAF, B-Raf proto-oncogene, serine/threonine kinase
COX-2, cyclooxygenase-2
CUR, curcumin
CYP3A4, cytochrome P450 3A4
DMSO, dimethyl sulfoxide
DTT, dithiothreitol
eEF2, eukaryotic translation elongation factor 2
eEF2K, eukaryotic elongation factor 2 kinase
Erk1/2, extracellular signal regulated kinases1/2
HRP, horseradish peroxidase
IKK α , inhibitor of nuclear factor kappa B kinase subunit alpha
mTORC1, mechanistic target of rapamycin complex 1
MAPK, mitogen activated protein kinase
NF κ B, nuclear factor kappa B
PI3K, phosphoinositide 3 kinase
PIP, piperine
PRAS40, proline-rich Akt substrate 40
p70S6K, p70 ribosomal protein S6 kinase B1
Raptor, regulatory-associated protein of mTOR
Ras, GTPase Ras proteins
Rheb, Ras homolog enriched in brain
S6, 40S ribosomal protein S6
TNF α , tumor necrosis factor alpha
TSC1/2, tuberous sclerosis complex 1/2
4EBP1, eukaryotic translation initiation factor 4E binding protein 1

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