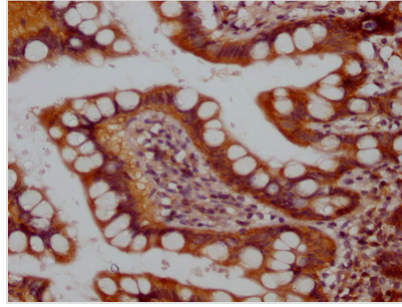


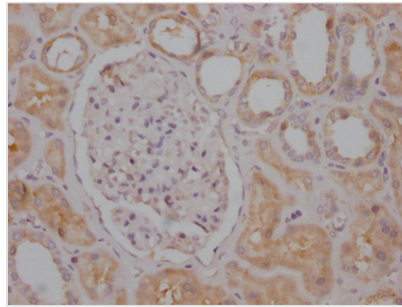


RPTOR Recombinant Monoclonal Antibody

Product Code	CSB-RA581950A0HU
Storage	Upon receipt, store at -20°C or -80°C. Avoid repeated freeze.
Uniprot No.	Q8N122
Immunogen	A synthesized peptide derived from human Raptor
Species Reactivity	Human
Tested Applications	ELISA, IHC; Recommended dilution: IHC:1:50-1:200
Relevance	Involved in the control of the mammalian target of rapamycin complex 1 (mTORC1) activity which regulates cell growth and survival, and autophagy in response to nutrient and hormonal signals; functions as a scaffold for recruiting mTORC1 substrates. mTORC1 is activated in response to growth factors or amino acids. Growth factor-stimulated mTORC1 activation involves a AKT1-mediated phosphorylation of TSC1-TSC2, which leads to the activation of the RHEB GTPase that potently activates the protein kinase activity of mTORC1. Amino acid-signaling to mTORC1 requires its relocalization to the lysosomes mediated by the Ragulator complex and the Rag GTPases. Activated mTORC1 up-regulates protein synthesis by phosphorylating key regulators of mRNA translation and ribosome synthesis. mTORC1 phosphorylates EIF4EBP1 and releases it from inhibiting the elongation initiation factor 4E (eIF4E). mTORC1 phosphorylates and activates S6K1 at 'Thr-389', which then promotes protein synthesis by phosphorylating PDCD4 and targeting it for degradation. Involved in ciliogenesis.
Form	Liquid
Conjugate	Non-conjugated
Storage Buffer	Rabbit IgG in phosphate buffered saline, pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol.
Purification Method	Affinity-chromatography
Isotype	Rabbit IgG
Clonality	Monoclonal
Product Type	Recombinant Antibody
Immunogen Species	Homo sapiens (Human)
Research Area	Epigenetics and Nuclear Signaling; Cell biology; Signal transduction
Gene Names	RPTOR
Clone No.	1B10
Image	



IHC image of CSB-RA581950A0HU diluted at 1:100 and staining in paraffin-embedded human small intestine tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.



IHC image of CSB-RA581950A0HU diluted at 1:100 and staining in paraffin-embedded human kidney tissue performed on a Leica Bond™ system. After dewaxing and hydration, antigen retrieval was mediated by high pressure in a citrate buffer (pH 6.0). Section was blocked with 10% normal goat serum 30min at RT. Then primary antibody (1% BSA) was incubated at 4? overnight. The primary is detected by a Goat anti-rabbit IgG polymer labeled by HRP and visualized using 0.05% DAB.

Description

RPTOR, also called RAPTOR, an essential component of mTORC1, functions as a scaffold for mTOR kinase to recruit and phosphorylate specific substrates such as S6K1 and to initiate the nucleic acid synthesis and cap-dependent translation as well as SREBP1 to promote cell metabolism. It is essential for mTORC1 activity and critical for the regulation of mTORC1 activity in response to insulin signaling and nutrient and energy sufficiency. RAPTOR also plays an instructive role in the development and function of B cells, and the deficiency of RAPTOR impairs the survival and proliferation of pre-B cells.

The recombinant RPTOR antibody was produced by cloning antibody genes into an expression vectors, which were subsequently introduced into mammalian cells to provide animal-free antibody production. This RPTOR antibody has been validated in ELISA, IHC. It has the features of improved affinity, stability, and consistency between different batches.