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EGF Rabbit pAb

Catalog # AP99062

Product Information

Application	IHC-P, IHC-F, IF
Primary Accession	P01132
Other Accession	P01132
Reactivity	Mouse
Host	Rabbit
Clonality	Polyclonal
Calculated MW	133072
Physical State	Liquid
Immunogen	KLH conjugated synthetic peptide derived from mouse EGF
Epitope Specificity	1-53/53 (977-1029/1217)
Isotype	IgG
Purity	affinity purified by Protein A
Buffer	0.01M TBS (pH7.4) with 1% BSA, 0.02% Proclin300 and 50% Glycerol.
SIMILARITY	Contains 9 EGF-like domains. Contains 9 LDL-receptor class B repeats.
SUBUNIT	Interacts with EGFR and promotes EGFR dimerization. Interacts with RHBDF2. Interacts with RHBDF1; may retain EGF in the endoplasmic reticulum and regulates its degradation through the endoplasmic reticulum-associated degradation (ERAD).
Post-translational modifications	Phosphorylation at Ser-695 is partial and occurs only if Thr-693 is phosphorylated. Phosphorylation at Thr-678 and Thr-693 by PRKD1 inhibits EGF-induced MAPK8/JNK1 activation. Dephosphorylation by PTPRJ prevents endocytosis and stabilizes the receptor at the plasma membrane. Autophosphorylation at Tyr-1197 is stimulated by methylation at Arg-1199 and enhances interaction with PTPN6. Autophosphorylation at Tyr-1092 and/or Tyr-1110 recruits STAT3. Monoubiquitinated and polyubiquitinated upon EGF stimulation; which does not affect tyrosine kinase activity or signaling capacity but may play a role in lysosomal targeting. Polyubiquitin linkage is mainly through 'Lys-63', but linkage through 'Lys-48', 'Lys-11' and 'Lys-29' also occur. Deubiquitinated by OTUD7B, preventing degradation. Methylated. Methylation at Arg-1199 by PRMT5 positively stimulates phosphorylation at Tyr-1197.
DISEASE	Defects in EGF are the cause of hypomagnesemia type 4 (HOMG4) [MIM:611718]; also known as renal hypomagnesemia normocalciuric. HOMG4 is a disorder characterized by massive renal hypomagnesemia and normal levels of serum calcium and calcium excretion. Clinical features include seizures, mild-to mederate psychomotor retardation, and brisk tendon reflexes.
Important Note	This product as supplied is intended for research use only, not for use in human, therapeutic or diagnostic applications.
Background Descriptions	Epidermal growth factor (EGF) is an acid- and heat-stable 53 amino acid protein originally found in rodents and humans. It has been shown to be a potent mitogen for a variety of cell types both in vivo and in vitro. EGF binds to the EGF receptor on the surface of cells and mediates intrinsic phosphorylation of the receptor on tyrosine residues. It has been detected in nearly all body fluids, such as urine (urogastrone), saliva, milk and

platelet-rich plasma. EGF, TGF?and vaccinia virus growth factor exhibit 30-40% amino acid homology. Several additional members of the EGF/TGF family have been described; these include Cripto, Amphiregulin and the heparin-binding EGF-like growth factor. Amphiregulin and the heparin-binding EGF-like growth factor both bind to the EGF receptor.

Additional Information

Gene ID	13645
Other Names	HOMG4; URG; EGF_HUMAN; EGF; EGF_MOUSE; epidermal growth factor; epidermal growth factor (beta-urogastrone); Pro-epidermal growth factor
Dilution	IHC-P=1:100-500,IHC-F=1:100-500,IF=1:100-500,Flow-Cyt=1ug/Test
Storage	Store at -20 °C for one year. Avoid repeated freeze/thaw cycles. When reconstituted in sterile pH 7.4 0.01M PBS or diluent of antibody the antibody is stable for at least two weeks at 2-4 °C.

Protein Information

Name	Egf
Function	EGF stimulates the growth of various epidermal and epithelial tissues in vivo and in vitro and of some fibroblasts in cell culture. Magnesiotropic hormone that stimulates magnesium reabsorption in the renal distal convoluted tubule via engagement of EGFR and activation of the magnesium channel TRPM6 (By similarity).
Cellular Location	Membrane; Single-pass type I membrane protein.

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