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#12157**Human EGF Neutralizing (D8A1) Rabbit mAb**

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**For Research Use Only. Not for Use in Diagnostic Procedures.**

Applications:	Reactivity:	Source/Isotype:	UniProt ID:	Entrez-Gene Id:
N	H	Rabbit IgG	#P01133	1950

**Product Usage Information**

CST recommends incubation of the neutralizing antibody with the intended target for 1 hr at 37°C before addition to the experiment at an optimal concentration determined by the user.

Application	Dilution
Neutralizing	1:1

**Formulation**

Lyophilized from a 0.2 µm filtered solution in 10 mM HEPES with trehalose.

**Storage**

Store lyophilized material at -20°C. After reconstitution, recommended storage at 4°C for 1 month or -20°C for 6 months. Avoid repeated freeze/thawing.

**Specificity/Sensitivity**

Human EGF Neutralizing (D8A1) Rabbit mAb binds to human EGF and neutralizes its effects in an MCF 10A cell proliferation assay. This antibody does not cross-react with human betacellulin or human TGF-α.

**Source / Purification**

Monoclonal antibody is produced by immunizing animals with a recombinant human EGF protein.

**Description**

Neutralizing antibodies can be used to inhibit normal biological function through their binding to biological molecules. These reagents can be used to determine the effects that a particular molecule has in biological systems. Human EGF Neutralizing (D8A1) Rabbit mAb has been shown to neutralize the EGF-induced proliferation of MCF 10A cells *in vitro* with an ND<sub>50</sub> in the range of 200-700 ng/ml.

**Background**

EGF is produced by epithelial cells, fibroblasts, and many other cell types (1,2). Low molecular weight soluble EGF is generated through proteolysis of a larger ~130,000 kDa transmembrane precursor (1,2). Both soluble and membrane forms of EGF are active (2). EGF induces proliferation, differentiation, and survival of many cell types including tumor-derived cells (1-3). There are multiple members of the EGF family and multiple members of the HER/ErbB EGF receptor family. EGF binds to HER1/ErbB1 and induces homo- or heterodimerization with other HER/ErbB family members, resulting in signaling through the MAPK, PI3K/Akt, and Stat5 pathways (1). Research studies have implicated EGF, EGF family members, EGF receptors, and their signaling pathways in many cancers (1,2).

**Background References**

1. Citri, A. and Yarden, Y. (2006) *Nat Rev Mol Cell Biol* 7, 505-16.
2. Higashiyama, S. et al. (2008) *Cancer Sci* 99, 214-20.
3. Xian, C.J. (2007) *Endocr Rev* 28, 284-96.

**Species Reactivity**

Species reactivity is determined by testing in at least one approved application (e.g., western blot).

**Applications Key**

**N:** Neutralizing

**Cross-Reactivity Key**

**H:** Human

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