

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse Pro EGF in direct ELISAs and Western blots. In direct ELISAs, no cross-reactivity with recombinant mouse (rm) Amphiregulin, rmEpigen, rmEpiregulin, rmEGF, rmMFG-E8, recombinant human (rh) EGF, rhHB-EGF, rhHRG alpha, rhHRG beta, or recombinant rat EGF is observed.
Source	Monoclonal Rat IgG _{2A} Clone # 463004
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EGF Trp29-Arg1029 Accession # P01132
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

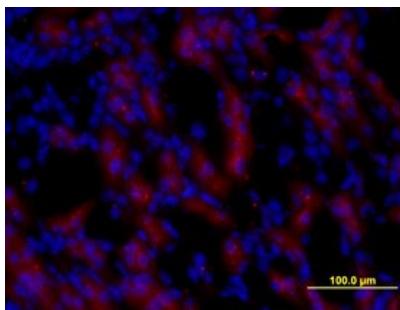
APPLICATIONS

Please Note: Optimal dilutions should be determined by each laboratory for each application. *General Protocols* are available in the *Technical Information* section on our website.

	Recommended Concentration	Sample
Western Blot	1 µg/mL	Recombinant Mouse Pro EGF aa 29-1029 (Catalog # 4095-EG) under non-reducing conditions only
Immunohistochemistry	8-25 µg/mL	See Below

DATA

Immunohistochemistry



Pro EGF in Mouse Kidney. Pro Epidermal Growth Factor (Pro EGF) was detected in perfusion fixed frozen sections of mouse kidney using Rat Anti-Mouse Pro EGF Monoclonal Antibody (Catalog # MAB5256) at 10 µg/mL for 3 hours at room temperature. Tissue was stained (red) and counterstained with DAPI (blue). View our protocol for [Fluorescent IHC Staining of Frozen Tissue Sections](#).

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	Use a manual defrost freezer and avoid repeated freeze-thaw cycles. <ul style="list-style-type: none"> ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

BACKGROUND

EGF is the prototypic member of a family of growth factors that also includes amphiregulin, betacellulin, epigen, epiregulin, HB-EGF, neuregulins-1 through -6, and TGF- α (1). These proteins contain EGF-like domains with three intramolecular disulfide bonds between conserved cysteines (2). EGF family members are synthesized as transmembrane preproteins with varying numbers of EGF-like domains (3). The extracellular region of mouse pro-EGF contains eight LDL R class B repeats and nine EGF-like domains (4). Mature EGF is derived from the juxtamembrane EGF-like domain. EGF binds ErbB1 and induces the formation of homodimers or heterodimers containing ErbB2 (5). Pro-EGF is most highly expressed in the submaxillary gland and kidney (6). In the kidney, the 190 kDa preproprotein is cleaved by membrane-associated serine proteases, liberating the extracellular region which is subsequently processed into smaller fragments including the 6 kDa mature EGF (7-10). The various cleavage products produced in the kidney also are present in urine (9-11). In the submaxillary gland, however, nearly all EGF is processed intracellularly and stored in secretory vesicles (6, 12). The soluble precursor binds ErbB1 and induces cellular proliferation, although it is significantly less potent than mature EGF (8, 9). In human thyroid carcinoma cells, a splice variant of pro-EGF with a deletion in the cytoplasmic domain induces increased proliferative activity relative to wild-type pro-EGF (13). Within the extracellular region, mouse pro-EGF shares 79% amino acid sequence identity with rat pro-EGF and 67%-69% with human, canine, feline, and porcine pro-EGF.

References:

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