Mouse EGFR Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1280

DESCRIPTION

Species Reactivity	Mouse
Specificity	Detects mouse EGFR in direct ELISAs and Western blots. In direct ELISAs, approximately 20% cross-reactivity with recombinant human (rh) EGFR and less than 5% cross-reactivity with rhErbB2, rhErbB3, and rhErbB4 is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant mouse EGFR Leu25-Ser647 Accession # Q9EP98
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.

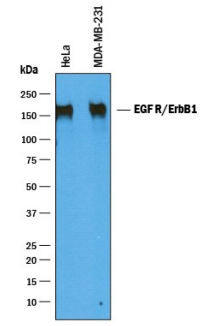
APPLICATIONS

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	0.25 µg/mL	See Below
Immunohistochemistry	5-15 µg/mL	See Below
Simple Western	2.5 µg/mL	See Below

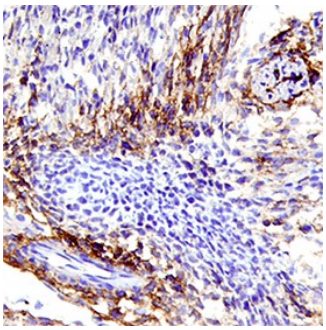
DATA

Western Blot



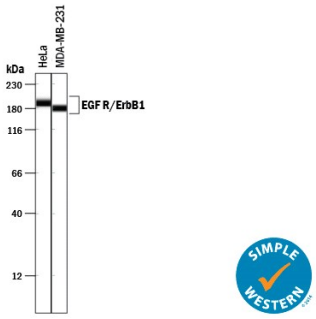
Detection of Human EGFR by Western Blot. Western blot shows lysates of HeLa human cervical epithelial carcinoma cell line and MDA-MB-231 human breast cancer cell line. PVDF membrane was probed with 0.25 µg/mL of Goat Anti-Mouse EGFR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1280) followed by HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF019). A specific band was detected for EGFR at approximately 170 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunohistochemistry



EGFR in Mouse Embryo. EGFR was detected in immersion fixed frozen sections of mouse embryo (13 d.p.c.) using Goat Anti-Mouse EGFR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1280) at 15 µg/mL overnight at 4 °C. Tissue was stained using the Anti-Goat HRP-DAB Cell & Tissue Staining Kit (brown; Catalog # CTS008) and counterstained with hematoxylin (blue). Specific staining was localized to developing muscle. View our protocol for Chromogenic IHC Staining of Frozen Tissue Sections.

Simple Western



Detection of Human EGFR by Simple Western™. Simple Western lane view shows lysates of HeLa human cervical epithelial carcinoma cell line and MDA-MB-231 human breast cancer cell line, loaded at 0.2 mg/mL. A specific band was detected for EGFR at approximately 180-191 kDa (as indicated) using 2.5 µg/mL of Goat Anti-Mouse EGFR Antigen Affinity-purified Polyclonal Antibody (Catalog # AF1280) followed by 1:50 dilution of HRP-conjugated Anti-Goat IgG Secondary Antibody (Catalog # HAF109). This experiment was conducted under reducing conditions and using the 12-230 kDa separation system.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 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.** ● 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.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956

Mouse EGFR Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF1280

BACKGROUND

The EGFR subfamily of receptor tyrosine kinases comprises four members: EGFR (also known as Her1, ErbB1, or ErbB), ErbB2 (Neu, Her2), ErbB3 (Her3), and ErbB4 (Her4). All family members are type I transmembrane glycoproteins. They contain an extracellular ligand binding domain containing two cysteine-rich domains and a cytoplasmic domain containing a membrane-proximal tyrosine kinase domain followed by multiple tyrosine autophosphorylation sites (1, 2). The mouse EGFR cDNA encodes a 1210 amino acid (aa) precursor with a 24 aa signal peptide, a 623 aa extracellular domain (ECD), a 23 aa transmembrane segment, and a 540 aa cytoplasmic domain (3). Soluble receptors consisting of the extracellular ligand binding domain are generated by alternate splicing in human and mouse (4-6). Within the ECD, mouse EGFR shares 88% and 93% aa sequence identity with human and rat EGFR, respectively. It shares 44-48% aa sequence identity with the ECD of mouse ErbB2, ErbB3, and ErbB4. EGFR binds a subset of the EGF family ligands, including EGF, amphiregulin, TGF-α, betacellulin, epiregulin, HB-EGF, and epigen (1, 2). Ligand binding induces EGFR homodimerization as well as heterodimerization with ErbB2, resulting in kinase activation, heterodimerization tyrosine phosphorylation and cell signaling (7-11). EGFR can also be recruited to form heterodimers with the ligand-activated ErbB3 or ErbB4. EGFR signaling regulates multiple biological functions including cell proliferation, differentiation, motility, and apoptosis (12, 13). EGFR is over-expressed in a wide variety of tumors and is the target of several anti-cancer drugs (14).

References:

1. Singh, A.B. and R.C. Harris (2005) Cell. Signal. **17**:1183.
2. Shilo, B.Z. (2005) Development **132**:4017.
3. Avivi, A. *et al.* (1991) Oncogene **6**:673.
4. Reiter, J.L. and N.J. Maihle (1996) Nucleic Acids Res. **24**:4050.
5. Reiter J.L. *et al.* (2001) Genomics **71**:1.
6. Xu, Y.H. *et al.* (1984) Nature **309**:806.
7. Graus-Porta, D. *et al.* (1997) EMBO J. **16**:1647.
8. Yarden, Y. *et al.* (1987) Biochemistry **26**:1434.
9. Burgess, A.W. *et al.* (2003) Mol. Cell **12**:541.
10. Lemmon, M.A. *et al.* (1997) EMBO J. **16**:281.
11. Cohen, S. *et al.* (1982) J. Biol. Chem. **257**:1523.
12. Sibilia, M. and E.F. Wagner (1995) Science **269**:234.
13. Miettinen, P.J. *et al.* (1995) Nature **376**:337.
14. Roskoski Jr., R. (2004) Biochem. Biophys. Res. Commun. **319**:1.

bio-techne
bio-techne.com
Global info@bio-techne.com techsupport@bio-techne.com
North America TEL 800 343 7475 Europe | Middle East | Africa TEL +44 (0)1235 529449
China info.cn@bio-techne.com TEL +86 (21) 52380373
Rest of World bio-techne.com/find-us/distributors TEL +1 612 379 2956