Epidermal Growth Factor Receptor (EGFR) Ab-1 (Clone 528)
Mouse Monoclonal Antibody

Cat. #MS-268-P0, -P1, or -P (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Purified Ab with BSA and Azide)
Cat. #MS-268-P1ABX or -PABX (0.1ml or 0.2ml at 1.0mg/ml) (Purified Ab without BSA and Azide)
Cat. #MS-268-B0, -B1, or -B (0.1ml, 0.5ml, or 1.0ml at 200µg/ml) (Biotin-Labeled Ab with BSA and Azide)

**Description:** EGFR is type I receptor tyrosine kinase with sequence homology to erbB-1, -2, -3, -4 or HER-1, -2, -3, -4. It binds to Epidermal Growth Factor (EGF), Transforming Growth Factor-α (TGF-α), Heparin-binding EGF (HB-EGF), amphiregulin, betacellulin and epiiregulin. EGFR is overexpressed in tumors of breast, brain, bladder, lung, gastric, head & neck, esophagus, cervix, vulva, ovary, and endometrium. It is predominantly present in squamous cell carcinomas.

**Comments:** Ab-1 blocks EGF/TGFα-induced activation of EGFR.\(^1,2\) It also blocks tumor growth in vivo. It has no effect on tyrosine kinase activity of the receptor. It inhibits the binding of Ab-2.

**Mol. Wt. of Antigen:** 170kDa (wild type) and 145kDa (vIII variant)

**Epitope:** Extracellular domain

**Species Reactivity:** Human and Dog. Does not react with mouse & rat. Others-not known.

**Clone Designation:** 528

**Ig Isotype:** IgG\(_{2a}\)

**Immunogen:** Purified EGFR from A431 cells.\(^1\)

**Applications and Suggested Dilutions:**
- Affinity Purification (Order Ab without BSA)
- Blocks EGF/TGFα-induced Activation of EGFR (Order Ab without azide; Ab at 0.5µg/ml, cells induced by 30ng/ml EGF)
- Inhibits Binding of Ab-2 (clone 225) to EGFR
- Inhibits Proliferation of A431 Cells\(^1\)
- Arrests Tumor Growth in vivo (Order Ab without azide)
- Immunoprecipitation (Native only)
- Western Blotting (Not suitable)
- Flow Cytometry

The optimal dilution for a specific application should be determined by the investigator.

**Positive Control:** A431 cells.

**Cellular Localization:** Cell membrane

**Supplied As:**
200µg/ml antibody purified from the ascites fluid by Protein A chromatography. Prepared in 10mM PBS, pH 7.4, with 0.2% BSA and 0.09% sodium azide. Also available without BSA and azide at 1mg/ml.

**Storage and Stability:**
Ab with sodium azide is stable for 24 months when stored at 2-8°C. Antibody WITHOUT sodium azide is stable for 36 months when stored at below 0°C.

**Key References:**

**Material Safety Data:**
This product is not licensed or approved for administration to humans or to animals other than the experimental animals. Standard Laboratory Practices should be followed when handling this material. The chemical, physical, and toxicological properties of this material have not been thoroughly investigated. Appropriate measures should be taken to avoid skin and eye contact, inhalation, and ingestion. The material contains 0.09% sodium azide as a preservative. Although the quantity of azide is very small, appropriate care should be taken when handling this material as indicated above. The National Institute of Occupational Safety and Health has issued a bulletin citing the potential explosion hazard due to the reaction of sodium azide with copper, lead, brass, or solder in the plumbing systems. Sodium azide forms hydrazoic acid in acidic conditions and should be discarded in a large volume of running water to avoid deposits forming in metal drainage pipes.

**For Research Use Only**

**Limitations and Warranty:**
Our products are intended FOR RESEARCH USE ONLY and are not approved for clinical diagnosis, drug use or therapeutic procedures. No products are to be construed as a recommendation for use in violation of any patents. We make no representations, warranties or assurances as to the accuracy or completeness of information provided on our data sheets and website. Our warranty is limited to the actual price paid for the product. NeoMarkers is not liable for any property damage, personal injury, time or effort or economic loss caused by our products.

**Additional Key References:**
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2. Kawamoto T; Sato JD; Le A; Polikoff J; Sato GH; Mendelsohn J. Growth stimulation of A431 cells by epidermal growth factor: identification of high-affinity receptors for epidermal growth factor by an anti-receptor monoclonal antibody. Proceedings of the National Academy of Sciences of the United States of America, 1983, 80(5):1337-41.
3. Gill GN; Kawamoto T; Cochet C; Le A; Sato JD; Masui H; McLeod C; Mendelsohn J. Monoclonal anti-epidermal growth factor receptor antibodies which are inhibitors of epidermal growth factor binding and antagonists of epidermal growth factor binding and antagonists of epidermal growth factor-stimulated tyrosine protein kinase activity. Journal of Biological Chemistry, 1984, 259(12):7755-60.
5. Sobol RE; Astaria RW; Hofeditz C; Masui H; Fairshter R; Royston I; Mendelsohn J. Epidermal growth factor receptor expression in human lung carcinomas defined by a monoclonal antibody. Journal of the National Cancer Institute, 1987, 79(3):403-7.
6. Werner MH; Humphrey PA; Bigner DD; Bigner SH. Growth effects of epidermal growth factor (EGF) and a monoclonal antibody against the EGF receptor on four glioma cell lines. Acta Neuropathologica, 1988, 77(2):196-201.
13. den Hartig JC; van Bergen en Henegouwen PM; Boonstra J; Verkleij AJ. Cholesterol and phosphoinositides increase affinity of the epidermal growth factor receptor. Biochimica et Biophysica Acta, 1993, 1148(2):249-56.
17. Sturgis EM; Sacks PG; Masui H; Mendelsohn J; Schantz SP. Effects of antiepidermal growth factor receptor antibody 528 on the proliferation and differentiation of head and neck cancer. Otolaryngology and Head and Neck Surgery, 1994, 111(5):633-43.