DB138: EGFR (EGFR1)

Background:

The EFGR family is a group of four structurally similar tyrosine kinases (EGFR, HER2/neu, ErbB-3, and ErbB-4) that dimerize on binding with a number of ligands, including EGF and transforming growth factor alpha (1&2). The 170 kDa epidermal growth factor receptor binds EGF which activates a tyrosine-specific protein kinase activity intrinsic to the receptor (3&4). Epidermal growth factor receptor overexpression is pronounced in virtually all squamous carcinomas and is also found in > or = 65% of large cell and adenocarcinomas. It is not expressed in situ by small cell lung carcinoma. Overexpression of EGFR is one of the earliest and most consistent abnormalities in bronchial epithelium of high-risk smokers (1).

Origin:

EGFR (EGFR1) is mouse monoclonal IgG2b generated by immunizing mice with the human epidermoid carcinoma line A431. Epitope mapping between aa 6-273 of human EGFR.

Product Details:

Each vial contains 100 µg/ml of mouse monoclonal IgG2b EGFR (EGFR1) DB138, in 1 ml PBS containing 0.1 % sodium azide and 0.2% gelatin.

Specificity:

EGFR (EGFR1) DB138 reacts with EGFR of human origin by western blotting, immunoprecipitation, FACS, and immunohistochemistry (including paraffin-embedded sections). Western blotting starting dilution: 1:200. A431 lysates can be used as a positive control.

Storage:

Store this product at 4º C, do not freeze. The product is stable for one year from the date of shipment.

References:

1. Franklin WA, Veve R, Hirsch FR, Helfrich BA, Bunn PA Jr. Epidermal growth factor receptor family in lung cancer and premalignancy. Semin Oncol 2002 Feb;29(1 Suppl 4):3-14.
2. Yarden Y. The EGFR family and its ligands in human cancer, signalling mechanisms and therapeutic opportunities. Eur J Cancer 2001 Sep: 37 Suppl 4: S3-8.
3. Reynolds F.H. Jr., Todaro G.J., Fryling C., and Stephenson J.R. Human transforming growth factors induces tyrosine phosphorylation of EGR receptors. Nature 1981 292: 259-262.
4. Chen W.S., Lazar C.S., Poenie M, Tsien R.Y., Gill G.N., Rosenfeld M.G. Requirement for intrinsic protein tyrosine kinase in the immediate and late actions of the EGF receptor. Nature 1987 328: 820-823.