

Store at
-20°C

#79884

Lung Cancer RTK Antibody Sampler Kit



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For Research Use Only. Not For Use In Diagnostic Procedures.

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
EGF Receptor (D38B1) XP® Rabbit mAb	4267	20 µL	175 kDa	Rabbit IgG
EGF Receptor (L858R Mutant Specific) (43B2) Rabbit mAb	3197	20 µL	175 kDa	Rabbit IgG
EGF Receptor (E746-A750del Specific) (D6B6) XP® Rabbit mAb	2085	20 µL	175 kDa	Rabbit IgG
ALK (D5F3®) XP® Rabbit mAb	3633	20 µL	220 (ALK), 80 (NPM-ALK), 117 (EML4-ALK v1), 86 (EML4-ALK v3) kDa	Rabbit IgG
HER2/ErbB2 (D8F12) XP® Rabbit mAb	4290	20 µL	185 kDa	Rabbit IgG
FGF Receptor 1 (D8E4) XP® Rabbit mAb	9740	20 µL	92, 120, 145 kDa	Rabbit IgG
ROS1 (D4D6®) Rabbit mAb	3287	20 µL	258, 110, 50-80 kDa	Rabbit IgG
Ret (E1N8X) XP® Rabbit mAb	14556	20 µL	150, 175 kDa	Rabbit IgG
Met (D1C2) XP® Rabbit mAb	8198	20 µL	140, 170 kDa	Rabbit IgG
Anti-rabbit IgG, HRP-linked Antibody	7074	100 µL		Goat

See www.cellsignal.com for individual component applications, species cross-reactivity, dilutions, and additional application protocols.

Description: The Lung Cancer RTK Antibody Sampler Kit provides an economical means of detecting receptor tyrosine kinases (RTKs) associated with lung cancer. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: Lung cancer is the leading cause of cancer-related mortality worldwide (1). It is generally divided into two broad histological classifications: small cell lung cancer (SCLC) and non-small cell lung cancer (NSCLC). NSCLC comprises about 80-85% of all lung cancers. Receptor tyrosine kinases (RTKs) are essential components to cellular signaling pathways and are often overexpressed or otherwise dysregulated by genetic mutations, fusion, or gene amplification (2,3). RTKs are generally activated by receptor specific ligands, leading to autophosphorylation and the subsequent recruitment of downstream signaling proteins. The most common RTK amplification in NSCLC is that for epidermal growth factor receptor (EGFR). Also, two of the most common mutations in EGFR include an exon 19 deletion, E746-A750, and a point mutation L858R (4,5). In addition to EGFR, several other RTKs may become aberrantly activated in NSCLC, including ALK, ROS1, HER2/ErbB2, Met, Ret, FGF Receptor 1, and NTRK (6). Specific tyrosine kinase inhibitors (TKIs) have been part of the arsenal of treating the disease and so analyzing the expression and mutational status of these receptors plays an important role in personalized treatment.

Specificity/Sensitivity: Each antibody in the Lung Cancer RTK Antibody Sampler Kit detects endogenous levels of its target protein. FGF Receptor 1 (D8E4) XP® Rabbit mAb may slightly cross-react with overexpressed FGF receptor family members. IHC staining for ROS1 (D4D6®) Rabbit mAb may be observed in ROS1 rearranged lung carcinomas, macrophages/giant cells, reactive type II pneumocyte hyperplasia, and the epithelium in areas of bronchiolar metaplasia. Staining of unknown specificity has been observed in cholangiocarcinoma, hepatocellular carcinoma, and kidney tissues. HER2/ErbB2 (D8F12) XP® Rabbit mAb may cross-react slightly with other overexpressed RTKs. EGF Receptor (D38B1) XP® Rabbit mAb does not cross-react with other proteins of the ErbB family. Species cross-reactivity for IHC-P, IHC-BOND, and IF-IC is human only. EGFR (L858R Mutant Specific) (43B2) Rabbit mAb may cross-react with wild-type EGFR and other HER family members when highly overexpressed. Careful titration of this antibody may be required to obtain optimal specificity.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding E746-A750del and L865 mutant sequences of human EGFR, Pro320 of human Ret protein, and residues near the carboxy terminus of human Met protein, or recombinant proteins specific to the carboxy terminus of human FGF receptor 1, human ALK, human ROS1, the amino terminus of human HER2/ErbB2, and the cytoplasmic domain of human EGF receptor.

Storage: Supplied in 10 mM sodium HEPES (pH 7.5), 150 mM NaCl, 100 µg/mL BSA, 50% glycerol, and less than 0.02% sodium azide. Store at -20°C. Do not aliquot the antibodies.

Please visit www.cellsignal.com for validation data and a complete listing of recommended companion products.

Background References:

- (1) Sung, H. et al. (2021) *CA Cancer J Clin* 71, 209-249.
- (2) Reinmuth, N. et al. (2006) *Int J Cancer* 119, 727-34.
- (3) Du, Z. and Lovly, C.M. (2018) *Mol Cancer* 17, 58.
- (4) Kosaka, T. et al. (2004) *Cancer Res* 64, 8919-23.
- (5) Riely, G.J. et al. (2006) *Clin Cancer Res* 12, 7232-41.
- (6) Rebuzzi, S.E. et al. (2021) *Int J Mol Sci* 22, 2625.

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