

# Receptor Tyrosine Kinase Antibody Sampler Kit

Cat# AK0258

Upon receipt, store at -20°C. Avoid freeze/thaw cycles.

## PRODUCT DESCRIPTION

Tyrosine phosphorylation plays a key role in cellular signaling. In cancer studies, unregulated tyrosine kinase activity can drive malignancy and tumor formation by generating inappropriate proliferation and survival signals. Antibodies specific for phospho-tyrosine have been invaluable reagents in these studies. Met, a tyrosine kinase receptor for hepatocyte growth factor (HGF), is a heterodimer made of  $\alpha$ - and  $\beta$ -subunits. The cytoplasmic region of the  $\beta$ -chain is essential for tyrosine kinase activity. Interaction of Met with HGF results in autophosphorylation at multiple tyrosines (Tyr1003, 1234/1235, 1349) which recruit downstream signaling components, including Gab1, c-Cbl, and PI3 kinase. Altered Met levels and/or tyrosine kinase activities are found in several types of tumors, including renal, colon, and breast. The epidermal growth factor (EGF) receptor is a transmembrane tyrosine kinase that belongs to the HER/ErbB protein family. Ligand binding results in receptor dimerization, autophosphorylation, activation of downstream signaling, internalization, and lysosomal degradation. c-Src mediated phosphorylation of EGF receptor (EGFR) at Tyr845 provides a binding surface for substrate proteins. The SH2 domain of PLC  $\gamma$  binds at phospho-Tyr992, activating PLC  $\gamma$ -mediated downstream signaling. Adaptor protein c-Cbl binds at phospho-Tyr1045, leading to receptor ubiquitination and degradation. The GRB2 adaptor protein binds activated EGFR at phospho-Tyr1068, while phospho-Tyr1148 and -Tyr1173 provide a docking site for the Shc scaffold protein, playing a role in MAP kinase signaling. Platelet derived growth factor (PDGF) family proteins bind to two closely related receptor tyrosine kinases, PDGF receptor  $\alpha$  (PDGFR  $\alpha$ ) and PDGF receptor  $\beta$  (PDGFR  $\beta$ ). PDGFR  $\alpha$  and PDGFR  $\beta$  can each form heterodimers with EGFR, which is also activated by PDGF. Ligand binding induces receptor dimerization and autophosphorylation, followed by binding and activation of signal transduction molecules such as GRB2, Src, GAP, PI3 kinase, PLC  $\gamma$ , and NCK.

## PRODUCT INCLUDES

Cat No.	Product name	Quantity	Applications	Reactivity	Host
A330111	Phosphotyrosine Monoclonal Antibody	20 $\mu$ L	WB, IHC-p	ALL	Mouse
A340592	MET Polyclonal Antibody	20 $\mu$ L	WB, ELISA	Human	Rabbit
A340503	EGFR Polyclonal Antibody	20 $\mu$ L	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit

<b>A340626</b>	PDGFRA Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
<b>A340628</b>	PDGFRB Polyclonal Antibody	20µL	WB, IHC, IF, ELISA	Human, Mouse, Rat	Rabbit
<b>A340520</b>	FGFR1 Polyclonal Antibody	20µL	WB, IF, ELISA	Human, Mouse, Rat	Rabbit
<b>A340522</b>	FLT3 Polyclonal Antibody	20µL	WB, ELISA	Human, Mouse	Rabbit
<b>A340605</b>	ERBB2 Polyclonal Antibody	20µL	WB, IHC, ELISA	Human, Mouse, Rat	Rabbit
<b>A1013s</b>	Goat Anti-Rabbit IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Rabbit	Goat
<b>A1012s</b>	Goat Anti-Mouse IgG (H+L) (peroxidase/HRP conjugated)	120µL	WB, ELISA	Mouse	Goat

## **PRODUCT USE LIMITATION**

These products are intended for research use only.