Store at -20°C

Cancer-associated Growth Factor Antibody Sampler Kit

#17027

Support: +1-978-867-2388 (U.S.)
www.cellsignal.com/support

Orders: 877-616-2355 (U.S.)
orders@cellsignal.com

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

Product Includes	Product #	Quantity	Mol. Wt.	Isotype/Source
Basic FGF (E9S5A) Rabbit mAb	98658	20 µl	18, 22, 24 kDa	Rabbit IgG
IGF-I (E6B7O) Rabbit mAb	73034	20 µl	9,13,18, 20 kDa	Rabbit IgG
HGF β (D6S7D) XP® Rabbit mAb	52445	20 µl	35, 85 kDa	Rabbit IgG
TGF-β (56E4) Rabbit mAb	3709	20 µl	12, 45-60 kDa	Rabbit IgG
HBEGF (E5L5T) Rabbit mAb	27450	20 µl	18, 21, 27 kDa	Rabbit IgG
MIF (E7T1W) Rabbit mAb	87501	20 µl	12 kDa	Rabbit IgG
VEGF-A Antibody	65373	20 µl	16, 20, 23, 26 kDa	Rabbit
EREG (D4O5I) Rabbit mAb	12048	20 µl	17, 19, 30 kDa	Rabbit IgG
Angiopoietin-2 (D200) Antibody	50697	20 µl	68, 70 kDa	Rabbit
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 Cancer-associated Growth Factor Antibody Sampler Kit provides an economical means of detecting selected growth factors that have been shown to influence tumor development. The kit includes enough antibodies to perform two western blot experiments with each primary antibody.

Background: The tumor microenvironment (TME) is composed of a heterogenous mixture of tumor cells, blood vessels, fibroblasts, stromal cells, infiltrating immune cells, and extracellular matrix (ECM) components, whose collective interactions play important roles in tumor development (1). Cells in the TME secrete a variety of bioactive molecules, including growth factors, cytokines, ECM proteins, and proteases (e.g., MMPs), many of which play critical roles in regulating growth and development of the tumor (2,3). Growth factors play particularly important roles in the TME, serving as cellular messengers that trigger activation or suppression of signaling pathways that govern tumor development, either directly via the tumor cells, or indirectly by way of effects on the TME. Binding of growth factors to their cognate receptors leads to activation of intracellular signaling pathways, resulting in changes in the expression of target genes that regulate cell behavior. Many growth factors (e.g., IGFs, HGFs, FGFs, HBEGF, EREG) are known to promote tumor development by way of direct effects on tumor cells; other growth factors can affect tumor development indirectly, through effects in the TME that influence tumor angiogenesis (e.g., VEGFs, angiopoietins), ECM deposition (TGF-β), or immune cell signaling (e.g., TGF-β, HBEGF, MIF) (4). The diverse and complex role played by growth factors in promoting tumorigenesis makes them important therapeutic targets in oncology, while elucidating the functions of specific growth factors in the context of tumor development remains an active area of cancer research (5).

Specificity: Each antibody in the Cancer-associated Growth Factor Antibody Sampler Kit detects endogenous levels of its total target protein. VEGF-A Antibody recognizes endogenous levels of all isoforms of total VEGF-A protein. This antibody also detects a 47 kDa band of unknown identity. TGF-β (56E4) Rabbit mAb detects endogenous levels of TGF-β precursor proteins. The antibody preferentially detects TGF-β1 and TGF-β3 proteins, as determined by western blot analysis of recombinant proteins. HBEGF (E5L5T) Rabbit mAb recognizes endogenous levels of total proHBEGF and mature HBEGF protein. This antibody also detects a 58 kDa band of unknown origin. MIF (E7T1W) Rabbit mAb recognizes endogenous levels of total MIF protein. Non-specific staining by MIF (E7T1W) Rabbit mAb was observed in mouse brain by immunohistochemistry. EREG (D4O5I) Rabbit mAb recognizes endogenous levels of proepiregulin and the C-terminal propeptide of the EREG protein. It does not recognize the mature form of EREG.

Source/Purification: Monoclonal antibodies are produced by immunizing animals with recombinant protein specific to the mature full-length human basic FGF protein, with recombinant protein fragment specific to human mature HBEGF protein, with recombinant protein specific to the carboxy terminus of human HGF protein, with synthetic peptides corresponding to residues surrounding Ser83 of human IGF-I protein, Tyr100 of human MIF protein, and Glu155 of human EREG protein, and with synthetic peptides corresponding to a region in the carboxy terminus of TGF-β1 protein.

Polyclonal antibodies are produced by immunizing animals with synthetic peptides corresponding to residues surrounding His38 of human VEGFA protein and Asp200 of human angiopoietin-2 protein. Antibodies are purified by protein A and peptide affinity chromatography.

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) Quail, D.F. and Joyce, J.A. (2013) *Nat Med* 19, 1423-37.

(2) Wortzel, I. et al. (2019) *Dev Cell* 49, 347-360.

(3) Massagué, J. and Obenauf, A.C. (2016) *Nature* 529, 298-306.

(4) Penticuff, J.C. et al. (2019) *Nat Rev Urol* 16, 318-328.

(5) Steeg, P.S. (2016) *Nat Rev Cancer* 16, 201-18.

Thank you for your recent purchase. If you would like to provide a review visit cellsignal.com/comments.

www.cellsignal.com

Applications: **W**—Western **IP**—Immunoprecipitation **IHC**—Immunohistochemistry **ChIP**—Chromatin Immunoprecipitation **IF**—Immunofluorescence **F**—Flow cytometry **E-P**—ELISA-Peptide **Species Cross-Reactivity:** **H**—human **M**—mouse **R**—rat **Hm**—hamster **Mk**—monkey **Mi**—mink **C**—chicken **Dm**—D. melanogaster **X**—Xenopus **Z**—zebrafish **B**—bovine **Dg**—dog **Pg**—pig **Sc**—S. cerevisiae **Ce**—C. elegans **Hr**—Horse **All**—all species expected Species enclosed in parentheses are predicted to react based on 100% homology.