abcam

Product datasheet

Anti-Met (c-Met) (phospho Y1230 + Y1234 + Y1235) antibody ab5662

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Overview

Product name	Anti-Met (c-Met) (phospho Y1230 + Y1234 + Y1235) antibody
Description	Rabbit polyclonal to Met (c-Met) (phospho Y1230 + Y1234 + Y1235)
Host species	Rabbit
Specificity	The phosphospecific antibody that has been generated does not distinguish between the dually (pYpY 1234/1235) and triply (pYpYpY1230/1234/1235) phosphorylated forms of c-Met, both of which are likely to represent activated forms of this receptor.
Tested applications	**Suitable for:** WB
Species reactivity	**Reacts with:** Human **Predicted to work with:** Mouse, Rat
Immunogen	Synthetic peptide corresponding to Met (c-Met) (phospho Y1230 + Y1234 + Y1235).
Positive control	WB: HEK-293T whole cell lysate.
General notes	

Binding of scatter factor (SF)/hepatocyte growth factor (HGF) to the c Met receptor tyrosine kinase (RTK) triggers receptor dimerization and phosphorylation on multiple residues within the juxtamembrane, catalytic core and cytoplasmic tail domains, thereby regulating receptor internalization, catalytic activity and multisubstrate docking. c Met contains three tyrosines (Tyr-xx-x-Tyr-Tyr motif) within the activation loop of the catalytic domain. This is also seen with the insulin receptor, insulin-like growth factor receptor (IGF1) receptor and nerve growth factor (NGF) receptors/Trks, for which phosphorylation of all three tyrosines is required for full activation. With c Met (and the related family member, RON) phosphorylation of tyrosines 1234 and 1235 has been shown to be important in receptor activation. Activation of the c Met receptor results in binding and/or phosphorylation of many intracellular signaling proteins including multiple adaptor proteins (e.g., Grb2, Shc, Cbl, Crk, cortactin, paxillin, and GAB1), and a variety of other signal transducers (e.g., PI 3-kinase, FAK, Src, Erk1&2, JNK, PLC-ã, and STAT3).

The Life Science industry has been in the grips of a reproducibility crisis for a number of years. Abcam is leading the way in addressing this with our range of recombinant monoclonal antibodies and knockout edited cell lines for gold-standard validation. Please check that this product meets your needs before purchasing.

If you have any questions, special requirements or concerns, please send us an inquiry and/or contact our Support team ahead of purchase. Recommended alternatives for this product can be found below, along with publications, customer reviews and Q&As

Properties

Form	Liquid
Storage instructions	Shipped at 4°C. Store at +4°C short term (1-2 weeks). Upon delivery aliquot. Store at -20°C long term. Avoid freeze / thaw cycle.
Storage buffer	pH: 7.30 Preservative: 0.05% Sodium azide Constituents: PBS, 50% Glycerol, 0.1% BSA
Purity	Immunogen affinity purified
Purification notes	The antibody has been negatively preadsorbed using a non-phosphopeptide corresponding to the site of phosphorylation to remove antibody that is reactive with non-phosphorylated c-Met protein. The final product is generated by affinity chromatography using a c Met-derived peptide that is phosphorylated at tyrosines 1230, 1234, 1235.
Primary antibody notes	Binding of scatter factor (SF)/hepatocyte growth factor (HGF) to the c Met receptor tyrosine kinase (RTK) triggers receptor dimerization and phosphorylation on multiple residues within the juxtamembrane, catalytic core and cytoplasmic tail domains, thereby regulating receptor internalization, catalytic activity and multisubstrate docking. c Met contains three tyrosines (Tyr-xx-x-Tyr-Tyr motif) within the activation loop of the catalytic domain. This is also seen with the insulin receptor, insulin-like growth factor receptor (IGF1) receptor and nerve growth factor (NGF) receptors/Trks, for which phosphorylation of all three tyrosines is required for full activation. With c Met (and the related family member, RON) phosphorylation of tyrosines 1234 and 1235 has been shown to be important in receptor activation. Activation of the c Met receptor results in binding and/or phosphorylation of many intracellular signaling proteins including multiple adaptor proteins (e.g., Grb2, Shc, Cbl, Crk, cortactin, paxillin, and GAB1), and a variety of other signal transducers (e.g., PI 3-kinase, FAK, Src, Erk1&2, JNK, PLC-ã, and STAT3).
Clonality	Polyclonal
Isotype	IgG

Applications

The Abpromise guarantee Our **Abpromise guarantee** covers the use of ab5662 in the following tested applications.

The application notes include recommended starting dilutions; optimal dilutions/concentrations should be determined by the end user.

Application	Abreviews	Notes
WB	★★★☆☆ **(2)**	1/1000. Detects a band of approximately 169 kDa.

Target

Function	Receptor for hepatocyte growth factor and scatter factor. Has a tyrosine-protein kinase activity. Functions in cell proliferation, scattering, morphogenesis and survival.
Involvement in disease	Note=Activation of MET after rearrangement with the TPR gene produces an oncogenic protein. Note=Defects in MET may be associated with gastric cancer. Defects in MET are a cause of hepatocellular carcinoma (HCC) [MIM:114550].

Defects in MET are a cause of renal cell carcinoma papillary (RCCP) [MIM:605074]. It is a subtype of renal cell carcinoma tending to show a tubulo-papillary architecture formed by numerous, irregular, finger-like projections of connective tissue. Renal cell carcinoma is a heterogeneous group of sporadic or hereditary carcinoma derived from cells of the proximal renal tubular epithelium. It is subclassified into common renal cell carcinoma (clear cell, non-papillary carcinoma), papillary renal cell carcinoma, chromophobe renal cell carcinoma, collecting duct carcinoma with medullary carcinoma of the kidney, and unclassified renal cell carcinoma.
Note=A common allele in the promoter region of the MET shows genetic association with susceptibility to autism in some families. Functional assays indicate a decrease in MET promoter activity and altered binding of specific transcription factor complexes.
Note=MET activating mutations may be involved in the development of a highly malignant, metastatic syndrome known as cancer of unknown primary origin (CUP) or primary occult malignancy. Systemic neoplastic spread is generally a late event in cancer progression. However, in some instances, distant dissemination arises at a very early stage, so that metastases reach clinical relevance before primary lesions. Sometimes, the primary lesions cannot be identified in spite of the progresses in the diagnosis of malignancies.

Sequence similarities

Belongs to the protein kinase superfamily. Tyr protein kinase family.
Contains 3 IPT/TIG domains.
Contains 1 protein kinase domain.
Contains 1 Sema domain.

Domain

The kinase domain is involved in SPSB1 binding.

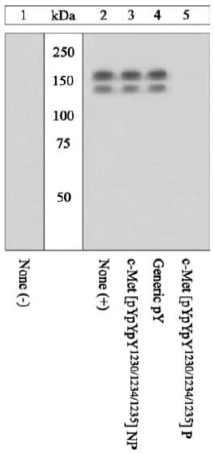
Post-translational modifications

Dephosphorylated by PTPRJ at Tyr-1349 and Tyr-1365.

Cellular localization

Membrane.

Images



Western blot - Anti-Met (c-Met) (phospho Y1230 + Y1234 + Y1235) antibody (ab5662)

All lanes : Anti-Met (c-Met) (phospho Y1230 + Y1234 + Y1235) antibody (ab5662) at 1/1000 dilution

Lane 1 : Unstimulated (-), HEK-293T (human epithelial cell line from embryonic kidney transformed with large T antigen) whole cell extract
Lanes 2-5 : Stimulated (+) with HGF, HEK-293T whole cell extract

Secondary
All lanes : Goat F(ab')2 antirabbit IgG HRP conjugate

Peptide Competition:

Prior primary antibody incubation:

1 and 2 - no peptide,

3 - non-phosphopeptide corresponding to the immunogen,

4 -generic phosphotyrosine-containing peptide),

5 - phosphopeptide immunogen.

SDS-PAGE on a 10% polyacrylamide gel and transferred to PVDF. Membranes were blocked with a 5% BSA-TBST buffer overnight at 4°C.

Bands were detected using the Pierce SuperSignal method.

The data show that only the phosphopeptide corresponding to c Met pYpYpY1230/1234/1235] block the antibody signal, demonstrating the specificity of the antibody.

Note: There are three isoforms of c Met, two of which are recognized by this antibody.

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