Canine HGF R/c-MET Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4140

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine HGF R/c-MET in ELISAs and Western blots. In sandwich immunoassays, less than 0.2% cross-reactivity with recombinant human HGF R and remombinant mouse HGF R is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant canine HGF R/c–MET Glu25-Leu935 Accession # Q75ZY9
Endotoxin Level	<0.10 EU per 1 µg of the antibody by the LAL method.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details. *Small pack size (-SP) is supplied as a 0.2 µm filtered solution in PBS.

APPLICATIONS

Please Note: *Optimal dilutions should be determined by each laboratory for each application. General Protocols are available in the Technical Information section on our website.*

	Recommended Concentration	Sample
Western Blot	0.1 µg/mL	Recombinant Canine HGF R/c-MET (Catalog # 4140-ME)
Canine HGF R/c-MET Sandwich Immunoassay		**Reagent**
ELISA Capture	0.2-0.8 µg/mL	Canine HGF R/c–MET Antibody (Catalog # AF4140)
ELISA Detection	0.1-0.4 µg/mL	Canine HGF R/c–MET Biotinylated Antibody (Catalog # BAF4140)
Standard		Recombinant Canine HGF R/c–MET (Catalog # 4140-ME)
Blockade of Receptor-ligand Interaction	In a functional ELISA, 1-5 µg/mL of this antibody will block 50% of the binding of 100 ng/mL of biotinylated Recombinant Canine HGF to immobilized Recombinant Canine HGF R/c-MET (Catalog # 4140-ME) coated at 2 µg/mL (100 µL/well). At 25 µg/mL, this antibody will block >90% of the binding.	

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below. *Small pack size (-SP) is shipped with polar packs. Upon receipt, store it immediately at -20 to -70 °C
Stability & Storage	**Use a manual defrost freezer and avoid repeated freeze-thaw cycles.** ● 12 months from date of receipt, -20 to -70 °C as supplied. ● 1 month, 2 to 8 °C under sterile conditions after reconstitution. ● 6 months, -20 to -70 °C under sterile conditions after reconstitution.

Canine HGF R/c-MET Antibody

Antigen Affinity-purified Polyclonal Goat IgG
Catalog Number: AF4140

BACKGROUND

HGF R, also known as Met (from *N*-methyl-*N*-nitro-*N*-nitrosoguanidine induced), is a glycosylated receptor tyrosine kinase that plays a central role in epithelial morphogenesis and cancer development. HGF R is synthesized as a single chain precursor which undergoes posttranslational proteolytic cleavage. This generates a mature HGF R that is a disulfide-linked dimer composed of a 50 kDa extracellular α chain and a 145 kDa transmembrane β chain (1, 2). The extracellular domain (ECD) contains a seven bladed β-propeller sema domain, a cysteine-rich PSI/MRS region, and four Ig-like E-set domains, while the cytoplasmic region includes a tyrosine kinase domain (3). The sema domain, which is formed by both the α and β chains of HGF R, mediates both ligand binding and receptor dimerization (3, 4). Ligand-induced tyrosine phosphorylation in the cytoplasmic region activates the kinase domain and provides docking sites for multiple SH2-containing molecules (5, 6). HGF stimulation induces HGF R downregulation *via* internalization and proteasome-dependent degradation (7). In the absence of ligand, HGF R forms noncovalent complexes with a variety of membrane proteins including CD44v6, CD151, EGF R, Fas, integrin α_6/β_4, plexins B1, B2, and B3, and MSP R/Ron (8-15). Ligation of one complex component triggers activation of the other, followed by cooperative signaling effects (8-15). Formation of some of these heteromeric complexes is a requirement for epithelial cell morphogenesis and tumor cell invasion (8, 12, 13). HGF released from neighboring mesenchymal cells stimulates HGF R on undifferentiated epithelium and induces epithelial cell scattering and branching tubulogenesis (16). Genetic polymorphisms, chromosomal translocation, overexpression, and additional splicing and proteolytic cleavage of HGF R have been described in a wide range of cancers (1). Within the ECD, canine HGF R shares 85%-88% amino acid sequence identity with human, mouse and rat HGF R.

References:

1. Birchmeier, C. *et al.* (2003) Nat. Rev. Mol. Cell Biol. **4**:915.
2. Corso, S. *et al.* (2005) Trends Mol. Med. **11**:284.
3. Gherardi, E. *et al.* (2003) Proc. Natl. Acad. Sci. USA **100**:12039.
4. Kong-Beltran, M. *et al.* (2004) Cancer Cell **6**:75.
5. Naldini, L. *et al.* (1991) Mol. Cell. Biol. **11**:1793.
6. Ponzetto, C. *et al.* (1994) Cell **77**:261.
7. Jeffers, M. *et al.* (1997) Mol. Cell. Biol. **17**:799.
8. Orian-Rousseau, V. *et al.* (2002) Genes Dev. **16**:3074.
9. Klosek, S.K. *et al.* (2005) Biochem. Biophys. Res. Commun. **336**:408.
10. Jo, M. *et al.* (2000) J. Biol. Chem. **275**:8806.
11. Wang, X. *et al.* (2002) Mol. Cell **9**:411.
12. Trusolino, L. *et al.* (2001) Cell **107**:643.
13. Giordano, S. *et al.* (2002) Nat. Cell Biol. **4**:720.
14. Conrotto, P. *et al.* (2004) Oncogene **23**:5131.
15. Follenzi, A. *et al.* (2000) Oncogene **19**:3041.
16. Sonnenberg, E. *et al.* (1993) J. Cell Biol. **123**:223.