Recombinant Cynomolgus Monkey HGFR/c-MET His-tag

Catalog Number: 11390-ME

DESCRIPTION

Source	Human embryonic kidney cell, HEK293-derived cynomolgus monkey HGFR/c-MET protein Alpha Chain Glu25-Arg307 & Beta Chain Ser308-Thr932 Accession # EHH52447.1
N-terminal Sequence Analysis	Glu25 & Ser308
Predicted Molecular Mass	33 kDa & 70 kDa

SPECIFICATIONS

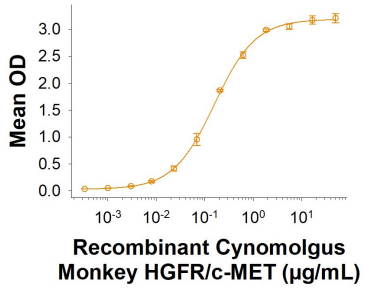
SDS-PAGE	41-46 kDa (alpha chain) & 76-84 kDa (beta chain) under reducing conditions.
Activity	Measured by its binding ability in a functional ELISA. Recombinant Cynomolgus Monkey HGFR/c-MET His-tag (Catalog # 11390-ME) binds to Recombinant Human HGF (NS0-expressed) Protein (Catalog # 294-HGN) with a ED_{50} of <0.400 µg/mL.
Endotoxin Level	<0.10 EU per 1 µg of the protein by the LAL method.
Purity	>95%, by SDS-PAGE visualized with Silver Staining and quantitative densitometry by Coomassie® Blue Staining.
Formulation	Lyophilized from a 0.2 µm filtered solution in PBS with Trehalose. See Certificate of Analysis for details.

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 200 µg/mL in PBS.
Shipping	The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.
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. • 3 months, -20 to -70 °C under sterile conditions after reconstitution.

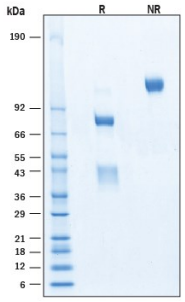
DATA

Binding Activity



Recombinant Cynomolgus Monkey HGFR/c-MET His-tag Protein Binding Activity. Measured by its binding ability in a functional ELISA. Recombinant Cynomolgus Monkey HGFR/c-MET His-tag Protein (Catalog # 11390-ME) binds to Recombinant Human HGF (NS0-expressed) Protein (Catalog # 294-HGN) with a ED_{50} of <0.400 µg/mL.

SDS-PAGE



Recombinant Cynomolgus Monkey HGFR/c-MET His-tag Protein SDS-PAGE. 2 µg/lane of Recombinant Cynomolgus Monkey HGFR/c-MET His-tag Protein (Catalog # 11390-ME) was resolved with SDS-PAGE under reducing (R) and non-reducing (NR) conditions and visualized by Coomassie® Blue staining, showing bands at 41-46 kDa (alpha chain) & 76-84 kDa (beta chain) under reducing conditions and a single band at 110-130 kDa under non-reducing (NR) conditions.

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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. Based on the high homology (98%) between cynomolgus and human HGF R, cynomolgus HGF R is predicted to be synthesized as a single chain precursor which undergoes cotranslational 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, and four Ig-like E-set domains, while the cytoplasmic region includes the tyrosine kinase domain (3, 4). Proteolysis and alternative splicing generate additional forms of human HGF R which either lack of the kinase domain, consist of secreted extracellular domains, or are deficient in proteolytic separation of the α and β chains (5-7). The sema domain, which is formed by both the α and β chains of HGF R, mediates both ligand binding and receptor dimerization (3, 7). Ligand-induced tyrosine phosphorylation in the cytoplasmic region activates the kinase domain and provides docking sites for multiple SH2-containing molecules (8, 9). HGF stimulation induces HGF R down-regulation *via* internalization and proteasome-dependent degradation (10). In the absence of ligand, HGF R forms noncovalent complexes with a variety of membrane proteins including CD44v6, CD151, EGF R, Fas, Integrin α6/β4, Plexins B1, 2, 3, and MSP R/Ron (11-18). Ligation of one complex component triggers activation of the other, followed by cooperative signaling effects (11 - 18). Formation of some of these heteromeric complexes is a requirement for epithelial cell morphogenesis and tumor cell invasion (11, 15, 16). Paracrine induction of epithelial cell scattering and branching tubulogenesis results from the stimulation of HGF R on undifferentiated epithelium by HGF released from neighboring mesenchymal cells (19). Genetic polymorphisms, chromosomal translocation, over-expression, and additional splicing and proteolytic cleavage of HGF R have been described in a wide range of cancers (1). Within the ECD, cynomolgus HGF R shares 98% aa sequence identity with human HGF R.

References:

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