

DESCRIPTION

Species Reactivity	Canine
Specificity	Detects canine HGF in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 50% cross-reactivity with recombinant human (rh) HGF is observed, approximately 15% cross-reactivity with recombinant mouse HGF is observed.
Source	Polyclonal Sheep IgG
Purification	Antigen Affinity-purified
Immunogen	<i>S. frugiperda</i> insect ovarian cell line Sf 21-derived recombinant canine HGF Arg28-Arg494 (Lys266Gln, Trp321Arg, Leu458Pro) (1± chain) & Val495-Ser730 (Ile693Thr) (1± chain) Accession # Q867B7
Conjugate	Alexa Fluor 405 Excitation Wavelength: 405 nm Emission Wavelength: 421 nm
Formulation	Supplied 0.2mg/ml in 1X PBS with RDF1 and 0.09% Sodium Azide *Contains <0.1% Sodium Azide, which is not hazardous at this concentration according to GHS classifications. Refer to the Safety Data Sheet (SDS) for additional information and handling instructions.

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.

Western Blot Optimal dilution of this antibody should be experimentally determined.

PREPARATION AND STORAGE

Shipping The product is shipped with polar packs. Upon receipt, store it immediately at the temperature recommended below.

Stability & Storage Protect from light. Do not freeze. 12 months from date of receipt, 2 to 8 °C as supplied

BACKGROUND

HGF, also known as scatter factor and hepatopoietin A, is a pleiotropic protein in the plasminogen subfamily of S1 peptidases. It is a multidomain molecule that includes an N-terminal PAN/APPLE-like domain, four Kringle domains, and a serine proteinase-like domain that has no detectable protease activity (1-4). Canine HGF is secreted as an inactive 699 amino acid (aa) single chain propeptide. It is cleaved after the fourth Kringle domain by a serine protease to form bioactive disulfide-linked HGF with a 60 kDa α and 30 kDa β chain. A variant of HGF with a 5 aa deletion in the first Kringle domain has been described in canine and other species (5). Canine HGF shares 97%, 99%, 93%, 93%, and 89% aa sequence identity with bovine, feline, human, mouse, and rat HGF, respectively. HGF binds heparan-sulfate proteoglycans and the widely expressed receptor tyrosine kinase, HGF R/c-MET (6, 7). HGF-dependent c-MET activation is implicated in the development of many human cancers (8). HGF regulates epithelial morphogenesis by inducing cell scattering and branching tubulogenesis (9, 10). HGF induces the upregulation of integrin α2β1 in epithelial cells by a selective increase in α2 gene transcription (11). This integrin serves as a collagen I receptor, and its blockade disrupts epithelial cell branching tubulogenesis (11, 12). HGF can also alter epithelium morphology by the induction of nectin-1α ectodomain shedding, an adhesion protein component of adherens junctions (13). In the thyroid, HGF induces the proliferation, motility, and loss of differentiation markers of thyrocytes and inhibits TSH-stimulated iodine uptake (14). HGF promotes the motility of cardiac stem cells in damaged myocardium (15).

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