

DESCRIPTION

Species Reactivity	Feline
Specificity	Detects feline IL-1β/IL-1F2 in ELISAs and Western blots. In Western blots, approximately 10% cross-reactivity with recombinant human IL-1β and recombinant mouse IL-1β is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	<i>E. coli</i> -derived recombinant feline IL-1β Ala116-Ser267 Accession # P41687
Formulation	Lyophilized from a 0.2 μm filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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 Feline IL-1β/IL-1F2 (Catalog # 1796-FL)
Immunocytochemistry	5-15 μg/mL	Immersion fixed feline lymphocytes
Feline IL-1β/IL-1F2 Sandwich Immunoassay		Reagent
ELISA Capture	0.2-0.8 μg/mL	Feline IL-1β/IL-1F2 Antibody (Catalog # AF1796)
ELISA Detection	0.1-0.4 μg/mL	Feline IL-1β/IL-1F2 Biotinylated Antibody (Catalog # BAF1796)
Standard		Recombinant Feline IL-1β/IL-1F2 (Catalog # 1796-FL)

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.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> ● 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.

BACKGROUND

IL-1 is a name that designates two pleiotropic cytokines, IL-1α (IL-1F1) and IL-1β (IL-1F2), which are the products of distinct genes. IL-1α and IL-1β are structurally related polypeptides that share approximately 27% amino acid (aa) identity in feline. Both proteins are produced by a wide variety of cells in response to inflammatory agents, infections, or microbial endotoxins. While IL-1α and IL-1β are regulated independently, they bind to the same receptor and exert identical biological effects. IL-1 RI binds directly to IL-1α or IL-1β and then associates with the IL-1 R accessory protein (IL-1 R3/IL-1 R AcP) to form a high-affinity receptor complex that is competent for signal transduction. IL-1 RII has high affinity for IL-1β but functions as a decoy receptor and negative regulator of IL-1β activity. IL-1ra functions as a competitive antagonist by preventing IL-1α and IL-1β from interacting with IL-1 RI (1-4). The feline IL-1β cDNA encodes a 267 aa precursor. A 115 aa propeptide is cleaved intracellularly by the cysteine protease IL-1β-converting enzyme (Caspase-1/ICE) to generate the active cytokine (5, 6). The 17 kDa mature feline IL-1β shares 63%-78% aa sequence identity with canine, cotton rat, equine, human, mouse, porcine, rat, and rhesus IL-1β.

References:

1. Allan, S.M. *et al.* (2005) *Nat. Rev. Immunol.* **5**:629.
2. Boraschi, D. and A. Tagliabue (2006) *Vitam. Horm.* **74**:229.
3. Kornman, K.S. (2006) *Am. J. Clin. Nutr.* **83**:475S.
4. Isoda, K. and F. Ohsuzu (2006) *J. Atheroscler. Thromb.* **13**:21.
5. Accession # AAA30814.
6. Martinon, F. and J. Tschopp (2007) *Cell Death Differ.* **14**:10.