Porcine IL-1α/IL-1F1 Antibody

Monoclonal Mouse IgG_{2A} Clone # 85733

Catalog Number: MAB315

DESCRIPTION

Species Reactivity	Porcine
Specificity	Detects porcine IL-1α/IL-1F1 in direct ELISAs and Western blots. In direct ELISAs and Western blots, approximately 100% cross-reactivity with recombinant human IL-1α, recombinant mouse IL-1α, and recombinant rat IL-1α is observed.
Source	Monoclonal Mouse IgG_{2A} Clone # 85733
Purification	Protein A or G purified from ascites
Immunogen	*E. coli*-derived recombinant porcine IL-1α/IL-1F1 Gln119-Ser270 Accession # P18430
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 either lyophilized or 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	1 µg/mL	Recombinant Porcine IL-1α/IL-1F1 (Catalog # 680-PI)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.5 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.

BACKGROUND

Interleukin 1 (IL-1) is a name that designates two proteins, IL-1α and IL-1β, that are the products of distinct genes, but show approximately 25% amino acid sequence identity and recognize the same cell surface receptors. Although IL-1 production is generally considered to be a consequence of inflammation, evidence suggests that IL-1 is also temporarily upregulated during bone formation and the menstrual cycle and can be induced in response to nervous system stimulation. In response to stimuli produced by inflammatory agents, infections, or microbial endotoxins, a dramatic increase in the production of IL-1 by macrophages and various other cells is seen. Cells in particular known to produce IL-1 include osteoblasts, monocytes, macrophages, keratinocytes, Kupffer cells, hepatocytes, thymic and salivary gland epithelium, Schwann cells, fibroblasts and glia (oligodendroglia, astrocytes and microglia).

IL-1α and IL-1β are both synthesized as 31 kDa precursors that are subsequently cleaved into proteins with molecular weights of approximately 17,000. Neither precursor contains a typical hydrophobic signal peptide sequence and most of the precursor form of IL-1α remains in the cytosol of cells, although there is evidence for a membrane-bound form of the precursor form of IL-1α. The IL-1α precursor reportedly shows full biological activity in the EL-4 assay. Among various species, the amino acid sequence of mature IL-1α is conserved 60% to 70% and porcine IL-1 has been found to be biologically active on murine cell lines. Both forms of IL-1 bind to the same receptors, designated as type I and type II. Evidence suggests that only the type I receptor is capable of signal transduction and that the type II receptor may function as a decoy, binding IL-1 and thus preventing the binding of IL-1 to the type I receptor.

References:

1. Dower, S.K. and J.E. Sims, in *Guidebook to Cytokines and their receptors* (1994) N.A. Nicole ed. Oxford University Press NY p. 17.

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