

## IL-1B (PN0166) Nb-FC recombinant antibody

<b>Catalog No :</b>	YA0611
<b>Reactivity :</b>	Human
<b>Applications :</b>	ELISA
<b>Target :</b>	IL-1B
<b>Gene Name :</b>	IL1B IL1F2
<b>Protein Name :</b>	Interleukin-1 beta (IL-1 beta) (Catabolin)
<b>Human Gene Id :</b>	3553
<b>Human Swiss Prot No :</b>	P01584
<b>Immunogen :</b>	Purified recombinant Human IL-1B
<b>Specificity :</b>	This recombinant monoclonal antibody can detects endogenous levels of IL-1B protein.
<b>Formulation :</b>	Phosphate-buffered solution
<b>Source :</b>	Camel, chimeric fusion of Nanobody (VHH) and mouse IgG1 Fc domain , recombinantly produced from 293F cell
<b>Dilution :</b>	ELISA 1:5000-100000
<b>Purification :</b>	Recombinant Expression and Affinity purified
<b>Concentration :</b>	Please check the information on the tube
<b>Storage Stability :</b>	-15°C to -25°C/1 year(Avoid freeze / thaw cycles)
<b>Background :</b>	IL-1 $\beta$ in humans and mice does not encode a typical signal peptide and, as a result, newly synthesized pro-IL-1 $\beta$ accumulates within the cytoplasm of activated monocytes and macrophages . Conversion of the inactive pro-IL-1 $\beta$ to its mature form requires the proteolytic action of IL-1 $\beta$ -converting enzyme (ICE), also termed

caspase-1 . Secretion of mature IL-1 $\beta$  from LPS-activated monocytes/macrophages is not a constitutive process. These cells must encounter a secondary stimulus that specifically activates the posttranslational processing events . Moreover, owing to its pro-inflammatory nature, IL-1 $\beta$  is regarded as a tumor-promoting cytokine. In fact, enhanced tumor metastasis and angiogenesis has been observed under the influence of IL-1 $\beta$  . IL-1 $\beta$  is able to facilitate tumor progression in murine models of lung cancer. In addition, upregulation of metastasis and tumor angiogenesis by IL-1 $\beta$  has been associated with increased activity of matrix metalloproteinases and expression of the pro-angiogenic molecule hepatocyte growth factor .

### Function :

Interleukin (IL)-1 $\beta$  is a cytokine with a key role in the pathophysiology of local and systemic inflammation. IL-1 $\beta$  induces cytokine, chemokine, proinflammatory molecule secretion, and adhesion molecule expression in diverse cells.

### Subcellular Location :

Cytoplasm, cytosol . Secreted . Lysosome . Secreted, extracellular exosome . The precursor is cytosolic (PubMed:15192144). In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted (PubMed:24201029, PubMed:33377178, PubMed:33883744). Mature form is secreted and released in the extracellular milieu by passing through the gasdermin-D (GSDMD) pore (PubMed:33883744). In contrast, the precursor form is not released, due to the presence of an acidic region that is proteolytically removed by CASP1 during maturation (PubMed:33883744). The secretion is dependent on protein unfolding and facilitated by the cargo receptor TMED10 (PubMed:32272059). .

### Expression :

Expressed in activated monocytes/macrophages (at protein level).

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