

IL1B Ab

Cat.#: BF0684
Size: 50ul,100ul,200ul

Concn.: 1mg/ml
Source: Mouse

Mol.Wt.: 31kDa
Clonality: Monoclonal

Application:	ELISA 1/10000, WB 1/500 - 1/2000, IHC 1/200 - 1/1000, ICC 1/200 - 1/1000
Reactivity:	Human
Purification:	Affinity-chromatography.
Specificity:	IL1B Ab detects endogenous levels of total IL1B.
Immunogen:	Purified recombinant fragment of human IL1B expressed in E. Coli.
Uniprot:	P01584
Description:	The modification of proteins with ubiquitin is an important cellular mechanism for targeting abnormal or short-lived proteins for degradation. Ubiquitination involves at least three classes of enzymes: ubiquitin-activating enzymes, or E1s, ubiquitin-conjugating enzymes, or E2s, and ubiquitin-protein ligases, or E3s. This gene encodes a member of the E2 ubiquitin-conjugating enzyme family. Four alternatively spliced transcript variants encoding the same protein have been found for this gene.
Subcellular Location:	Cytoplasm, cytosol. Lysosome. Secreted, exosome. Cytoplasmic vesicle, autophagosome. Secreted. The precursor is cytosolic. In response to inflammasome-activating signals, such as ATP for NLRP3 inflammasome or bacterial flagellin for NLRC4 inflammasome, cleaved and secreted. IL1B lacks any known signal sequence and the pathway(s) of its secretion is(are) not yet fully understood (PubMed:24201029). On the basis of experimental results, several unconventional secretion mechanisms have been proposed. 1. Secretion via secretory lysosomes: a fraction of CASP1 and IL1B precursor may be incorporated, by a yet undefined mechanism, into secretory lysosomes that undergo Ca(2+)-dependent exocytosis with release of mature IL1B (PubMed:15192144). 2. Secretory autophagy: IL1B-containing autophagosomes may fuse with endosomes or multivesicular bodies (MVBs) and then merge with the plasma membrane releasing soluble IL1B or IL1B-containing exosomes (PubMed:24201029). However, autophagy impacts IL1B production at several levels and its role in secretion is still controversial. 3. Secretion via exosomes: ATP-activation of P2RX7 leads to the formation of MVBs containing exosomes with entrapped IL1B, CASP1 and other

inflammasome components. These MVBs undergo exocytosis with the release of exosomes. The release of soluble IL1B occurs after the lysis of exosome membranes (By similarity). 4. Secretion by microvesicle shedding: activation of the ATP receptor P2RX7 may induce an immediate shedding of membrane-derived microvesicles containing IL1B and possibly inflammasome components. The cytokine is then released in the extracellular compartment after microvesicle lysis (PubMed:11728343). 5. Release by translocation through permeabilized plasma membrane. This may occur in cells undergoing pyroptosis due to sustained activation of the inflammasome (By similarity). These mechanisms may not be mutually exclusive.

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

Similarity: Belongs to the IL-1 family.

Storage Condition and Buffer: Mouse IgG1 in phosphate buffered saline (without Mg²⁺ and Ca²⁺), pH 7.4, 150mM NaCl, 0.02% sodium azide and 50% glycerol. Store at -20 °C. Stable for 12 months from date of receipt.

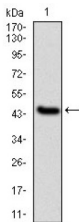
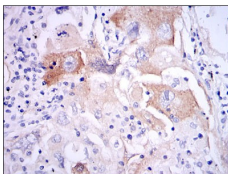
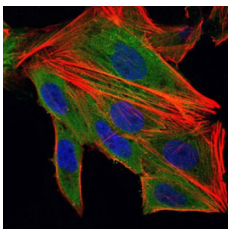


Figure 1: Western blot analysis using IL1B mAb against human IL1B (AA: 126-261) recombinant protein. (Expected MW is 41 kDa)



Immunohistochemical analysis of paraffin-embedded lung cancer tissues using IL1B mouse mAb with DAB staining.



Immunofluorescence analysis of HepG2 cells using IL1B mouse mAb (green). Blue: DRAQ5 fluorescent DNA dye. Red: Actin filaments have been labeled with Alexa Fluor-555 phalloidin.

IMPORTANT: For western blot, incubate membrane with diluted primary Ab in 5% w/v milk , 1X TBS, 0.1% Tween@20 at 4°C with gentle shaking, overnight.

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