

## Product datasheet for **TP728233S**

### Recombinant IL-1 alpha (Interleukin-1 alpha), Human

#### Product data:

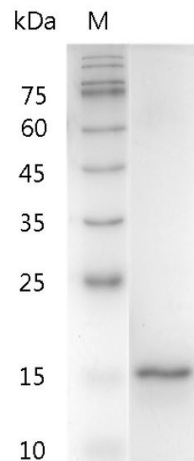
<b>Product Type:</b>	Recombinant Proteins
<b>Description:</b>	Recombinant IL-1 alpha (Interleukin-1 alpha), Human
<b>Species:</b>	Human
<b>Expression Host:</b>	E. coli
<b>Expression cDNA Clone or AA Sequence:</b>	MSAPFSFLSNVKYNFMRIIKYEFILNDALNQSIIIRANDQYLTAALHNLDEAVKFDMGAYKSSKDDAKITVIL RISKTQLYVTAQDEDQPVLLKEMPEIPKTITGSETNLLFFWETHGTKNYFTSVAHPNLFIA TKQDYWVCLAG GPPSITDFQILENQA with polyhistidine tag at the C-terminus.
<b>Tag:</b>	His Tag (C-term)
<b>Predicted MW:</b>	The protein has a calculated MW of 19 kDa. The protein migrates as 17 kDa under reducing condition (SDS-PAGE analysis).
<b>Purity:</b>	>98% as determined by SDS-PAGE.
<b>Buffer:</b>	The protein was lyophilized from a 0.2 µm filtered solution containing 1X PBS, pH 8.0.
<b>Bioactivity:</b>	Measure by its ability to induce D10.G4.1 cells proliferation. The ED <sub>50</sub> for this effect is <10 pg/mL. The specific activity of recombinant human IL-1 alpha is approximately >1 x10 <sup>8</sup> IU/ mg.
<b>Endotoxin:</b>	<0.1 EU per 1 µg of the protein by the LAL method.
<b>Reconstitution Method:</b>	Centrifuge at 3000 rpm for 5 mins before opening. It is recommended to reconstitute the lyophilized protein in sterile H <sub>2</sub> O to a concentration not less than 100 µg/mL and incubate the stock solution at room temperature for at least 20 mins to ensure sufficient re-dissolved. Do Not Vortex! Vigorous shaking may impair the biological activity of the protein.
<b>Applications:</b>	Cell culture
<b>Storage:</b>	Lyophilized protein should be stored at -20°C for 1 year. Upon reconstitution, store at 2°C to 8°C for up to 1 week. Further dilute in a buffer containing a carrier protein or stabilizer (e.g. 0.1% BSA, 10%FBS, 5%HSA or 5% trehalose solution), protein aliquots should be stored at -20°C or -80°C for 3-6 months. Avoid repeated freeze/thaw cycles.
<b>UniProt ID:</b>	<a href="#">P01583</a>
<b>Synonyms:</b>	Hematopoietin-1, Lymphocyte-Activating Factor (LAF), Endogenous Pyrogen (EP), Leukocyte



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**Summary:**

Interleukin-1 alpha (IL1 alpha or IL1 $\alpha$ ) is a member of the interleukin-1 cytokine family, found constitutively present in epithelial layers of the entire gastrointestinal tract, lung, liver, kidney, endothelial cells, and astrocytes. The synthesized IL-1 alpha is a 31 kDa inactive precursor and can be cleaved by intracellular caspase-1 or extracellular proteases to generate the bioactive 17 kDa form and the 16 kDa N-terminal cleavage product. Both precursor and mature IL-1 alpha protein bind to the IL-1 receptor (IL-1R), initiating a cascade of inflammatory cytokines and chemokines production such as IL-6, IL-8, and TNF, in response to viral and bacterial pathogens conditions. IL-1 alpha plays a central role in immune-surveillance mechanisms, stimulating macrophages, neutrophils, and CD8+ T cells activity.

**Product images:**

SDS- PAGE analysis of recombinant human IL-1 alpha