

# PRODUCT INFORMATION



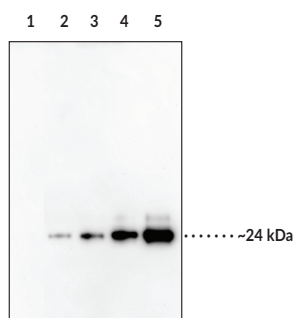
## Citrullinated Interleukin-6 Polyclonal Antibody

Item No. 36178

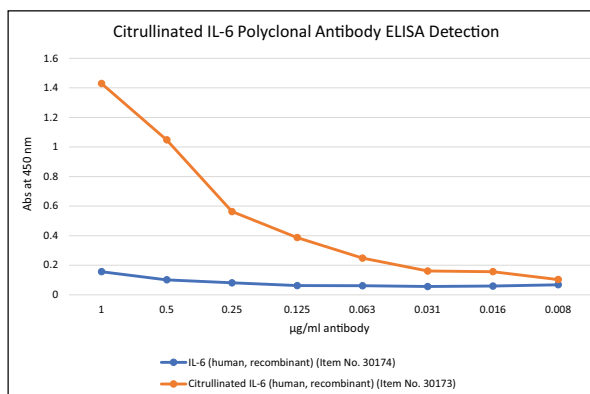
### Overview and Properties

<b>Contents:</b>	This vial contains 1 ml of peptide affinity-purified polyclonal antibody.
<b>Synonyms:</b>	B Cell Stimulatory Factor 2, BSF-2, CDF, CTL Differentiation Factor, HGF, Hybridoma Growth Factor, IFN- $\beta$ 2, IL-6, Interferon- $\beta$ 2
<b>Immunogen:</b>	Synthetic citrullinated peptide corresponding to an internal region of human IL-6
<b>Cross Reactivity:</b>	(+) Citrullinated IL-6
<b>Species Reactivity:</b>	(+) Human; (-) Others not tested
<b>Uniprot No.:</b>	P05231
<b>Form:</b>	Liquid
<b>Storage:</b>	-20°C (as supplied)
<b>Stability:</b>	$\geq 3$ years
<b>Storage Buffer:</b>	PBS, pH 7.2, with 50% glycerol and 0.02% sodium azide
<b>Host:</b>	Rabbit
<b>Applications:</b>	ELISA and Western blot (WB); the recommended starting dilution is 1:100 for ELISA and WB. Other applications were not tested, therefore optimal working concentration/dilution should be determined empirically.

### Images



Lane 1: IL-6 (human, recombinant) (Item No. 30174) (100 ng)  
Lane 2: Citrullinated IL-6 (human, recombinant) (Item No. 30173) (25 ng)  
Lane 3: Citrullinated IL-6 (human, recombinant) (Item No. 30173) (50 ng)  
Lane 4: Citrullinated IL-6 (human, recombinant) (Item No. 30173) (100 ng)  
Lane 5: Citrullinated IL-6 (human, recombinant) (Item No. 30173) (200 ng)



**WARNING**  
THIS PRODUCT IS FOR RESEARCH ONLY - NOT FOR HUMAN OR VETERINARY DIAGNOSTIC OR THERAPEUTIC USE.

**SAFETY DATA**  
This material should be considered hazardous until further information becomes available. Do not ingest, inhale, get in eyes, on skin, or on clothing. Wash thoroughly after handling. Before use, the user must review the [complete](#) Safety Data Sheet, which has been sent via email to your institution.

**WARRANTY AND LIMITATION OF REMEDY**  
Buyer agrees to purchase the material subject to Cayman's Terms and Conditions. Complete Terms and Conditions including Warranty and Limitation of Liability information can be found on our website.

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## Description

Interleukin-6 (IL-6) is a cytokine with roles in both the initiation and resolution of inflammatory responses.<sup>1,2</sup> IL-6 is produced in response to an inflammatory event, induces recruitment of neutrophils to the site of inflammation, and signals through the membrane-bound IL-6 receptor (IL-6R) to upregulate the synthesis of acute phase proteins, lipolysis in the liver, and induced differentiation of T and B cells. Following initiation of this classical signaling pathway, a soluble form of IL-6R (sIL-6R) is released from neutrophils to promote recruitment of monocytes and macrophages, induction of fever *via* IL-6 action in the hypothalamus, and production of anti-inflammatory M2 macrophages to initiate tissue repair. Production of IL-6 is dysregulated in various chronic inflammatory diseases, including rheumatoid arthritis, Castleman disease, polymyalgia rheumatica, and giant cell arteritis.<sup>3</sup> It also induces tumor growth and metastasis *via* activation of JAK/STAT signaling.<sup>4</sup> Recombinant human IL-6 can be citrullinated at arginine residues by protein arginine deiminase 4 (PAD4) *in vitro*.<sup>5</sup> Citrullinated IL-6 and anti-citrullinated peptide antibodies (ACPAs) reactive with citrullinated IL-6 have been found in synovial fluid and sera, respectively, from patients with rheumatoid arthritis. Cayman's Citrullinated Interleukin-6 Polyclonal Antibody can be used for ELISA and Western blot (WB) applications. The antibody recognizes citrullinated IL-6 at ~24 kDa from human samples.

## References

1. Del Giudice, M. and Gangestad, S.W. Rethinking IL-6 and CRP: Why they are more than inflammatory biomarkers, and why it matters. *Brain Behav. Immun.* **70**, 61-75 (2018).
2. Rose-John, S. Interleukin-6 family cytokines. *Cold Spring Harb. Perspect. Biol.* **10**(2), (2018).
3. Schett, G. Physiological effects of modulating the interleukin-6 axis. *Rheumatology (Oxford)* **57**(suppl 2), ii43-ii50 (2018).
4. Lacina, L., Brábek, J., Král, V., *et al.* Interleukin-6: A molecule with complex biological impact in cancer. *Histol. Histopathol.* **34**(2), 125-136 (2019).
5. Lu, C., Ohara, R., Campbell, P., *et al.* Citrullination of interleukin 6 augments its pro-inflammatory capacity and signaling potency through interleukin-6 receptor in rheumatoid arthritis [abstract]. *Arthritis Rheumatol.* **71** (suppl 10) (2019).

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