Human/Rat IL-32 Antibody

Recombinant Monoclonal Rabbit IgG Clone # 2525B
Catalog Number: MAB6769

DESCRIPTION

Species Reactivity	Human/Rat
Specificity	Detects human IL-32 beta and other IL-32 isoforms in direct ELISAs. In direct ELISAs, 95% cross-reactivity with recombinant human (rh) IL-32 alpha and 45% cross-reactivity with rhIL-32 gamma is detected.
Source	Recombinant Monoclonal Rabbit IgG Clone # 2525B
Purification	Protein A or G purified from cell culture supernatant
Immunogen	*E. coli*-derived human IL-32β protein Met1-Lys188 Accession # NP_001012649
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.

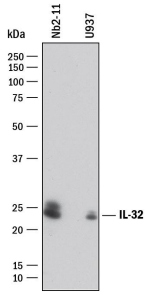
APPLICATIONS

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	See Below
Immunocytochemistry	3-25 µg/mL	See Below

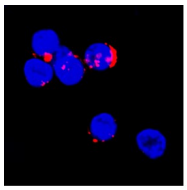
DATA

Western Blot

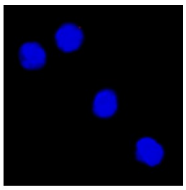


Detection of Human and Rat IL-32 by Western Blot. Western blot shows lysates of Nb2-11 rat lymphoma cell line and U937 human histiocytic lymphoma cell line. PVDF membrane was probed with 1 µg/mL of Rabbit Anti-Human/Rat IL-32 Monoclonal Antibody (Catalog # MAB6769) followed by HRP-conjugated Anti-Rabbit IgG Secondary Antibody (Catalog # Catalog # HAF008). Specific bands were detected for IL-32 at approximately 25 kDa (as indicated). This experiment was conducted under reducing conditions and using Immunoblot Buffer Group 1.

Immunocytochemistry



Positive (hPBMC+Cal/PMA)



Negative (hPBMC)

IL-32 in Human PBMCs. IL-32 was detected in immersion fixed human peripheral blood mononuclear cells (PBMCs) treated or untreated with calcium ionomycin and PMA using Rabbit Anti-Human/Rat IL-32 Monoclonal Antibody (Catalog # MAB6769) at 3 µg/mL for 3 hours at room temperature. Cells were stained using the NorthernLights™ 557-conjugated Anti-Rabbit IgG Secondary Antibody (red; Catalog # Catalog # NL004) and counterstained with DAPI (blue). Specific staining was localized to cytoplasm. View our protocol for Fluorescent ICC Staining of Cells on Coverslips.

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.

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BACKGROUND

Interleukin 32 (IL-32) is an N-glycosylated cytokine that is upregulated by inflammatory stimulation in monocytes, NK cells, epithelial cells, and pancreatic myofibroblasts (1-5). It cooperates with these stimuli to promote the expression of other proinflammatory molecules such as TNF-α, IL-6, IL-1β, IL-1α, and CXCL8/IL-8 (5-7). The longest of several IL-32 splicing variants is the 20-25 kDa gamma isoform which is also known as natural killer cell transcript 4 (NK4) (8, 9). The alpha isoform (IL-32α) lacks a portion of the putative signal peptide as well as 57 aa from the C-terminal region. IL-32α is less potent than IL-32β,γ, or δ at inducing the expression of proinflammatory molecules in peripheral blood mononuclear cells (PBMC) (8, 10). Neutrophil-derived Proteinase 3 (PR3) cleaves IL-32α between Thr57 and Val58, a cleavage site that is retained in other IL-32 isoforms (11). The N-terminal fragment of PR3-cleaved IL-32α shows increased potency at inducing CXCL2/MIP-2 and CXCL8 expression in PBMC relative to uncleaved IL-32α (11, 12). IL-32 is highly expressed by colonic epithelial cells in inflammatory bowel disease and Crohn's disease, rheumatoid arthritis synovium, and ductal epithelial cells in chronic pancreatitis and pancreatic cancer (5, 13-15). IL-32 inhibits HIV-1 replication *in vitro*, and it is elevated in the serum of HIV-1 patients (16, 17).

References:

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