Human IL-17 RE Antibody

Monoclonal Mouse IgG_1 Clone # 934832

Catalog Number: MAB8358

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human IL-17 RE in direct ELISAs.
Source	Monoclonal Mouse IgG_1 Clone # 934832
Purification	Protein A or G purified from hybridoma culture supernatant
Immunogen	Chinese hamster ovary cell line CHO-derived recombinant human IL-17 RE Met1-His454 Accession # Q8NFR9
Endotoxin Level	<0.10 EU per 1 μg of the antibody by the LAL method.
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.

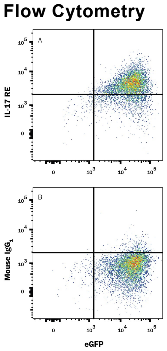
APPLICATIONS

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
Flow Cytometry	0.25 μg/10^6 cells	See Below
CyTOF-ready	Ready to be labeled using established conjugation methods. No BSA or other carrier proteins that could interfere with conjugation.	
Blockade of Receptor-ligand Interaction	In a functional ELISA, 0.05-0.25 μg/mL of this antibody will block 50% of the binding of 10 ng/mL of Recombinant Human IL-17C (Catalog # 1234-IL) to immobilized Recombinant Human IL-17 RE Fc Chimera (Catalog # 8358-MR) coated at 0.25 μg/mL (100 μL/well). At 2.5 μg/mL, this antibody will block >80% of the binding.	

DATA

Flow Cytometry



Detection of IL-17 RE in HEK293 Human Cell Line Transfected with Human IL-17 RE and eGFP by Flow Cytometry. HEK293 human embryonic kidney cell line transfected with either (A) human IL-17 RE or (B) human IL-17 RA and eGFP was stained with Mouse Anti-Human IL-17 RE Monoclonal Antibody (Catalog # MAB8358) followed by Allophycocyanin-conjugated Anti-Mouse IgG Secondary Antibody (Catalog # F0101B). Quadrant markers were set based on control antibody staining (Catalog # MAB002). View our protocol for Staining Membrane-associated Proteins.

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.

bio-techne
Global bio-techne.com info@bio-techne.com techsupport@bio-techne.com TEL +1 612 379 2956
USA TEL 800 343 7475 **Canada** TEL 855 668 8722 **China** TEL +86 (21) 52380373
Europe | Middle East | Africa TEL +44 (0)1235 529449

BACKGROUND

Interleukin-17 Receptor E (IL-17 RE) is an approximately 70 kDa (predicted) transmembrane protein in the family of IL-17 receptors. IL-17 RE is required for mediating the pro-inflammatory and homeostatic actions of IL-17C in the skin and mucosa (1, 2). Mature human IL-17 RE consists of a 431 amino acid (aa) extracellular domain, a 21 aa transmembrane segment, and a 192 aa cytoplasmic domain with one SEFIR/TIR domain (3). Within aa 115-454, human IL-17 RE shares 79% aa sequence identity with mouse and rat IL-17 RE. Alternative splicing of human IL-17 RE generates additional isoforms with a 116 aa N-terminal deletion and/or substitution and truncation in the ECD following aa 268 or aa 433. IL-17 RE is expressed on keratinocytes, mucosal epithelial cells, Th17 cells, and γ/δ T cells (4, 5). It associates with the widely expressed IL-17 RA to form a heterodimeric receptor for IL-17C (4-6). IL-17C binds to IL-17 RE with high affinity and to IL-17 RA with low affinity (4, 5). IL-17C expression is induced by inflammatory stimulation in colon and airway epithelial cells, keratinocytes, $CD4^+$ T cells, macrophages, and dendritic cells (4, 6, 7-9). It is up-regulated in various chronic inflammatory diseases including psoriasis, cystic fibrosis, and chronic obstructive pulmonary disease (COPD) (7, 8, 10). IL-17 RE is reciprocally down-regulated in psoriatic lesions (10). The interaction of IL-17C with IL-17 RE promotes mucosal immunity through the induction of anti-bacterial peptides and pro-inflammatory cytokines and chemokines (4, 6, 8, 9). IL-17C action supports the integrity of the colon epithelium following infection induced damage (4, 6, 11) but also contributes to psoriatic skin thickening and the progression of arthritis (4, 8, 9). IL-17C is additionally up-regulated in Th17 cell dependent autoimmunity (5). In this setting, it exacerbates disease severity by inducing Th17 cell production of IL-17A, IL-17F, IL-22, CCR6, and CCL20 (5). The up-regulation of IL-17 RE in hepatocellular carcinoma is associated with poor prognosis (12).

References:

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