

DESCRIPTION

Species Reactivity	Human
Specificity	Detects human OSM R β in Western blots. In Western blots, approximately 10% cross-reactivity with recombinant mouse OSM R β is observed.
Source	Polyclonal Goat IgG
Purification	Antigen Affinity-purified
Immunogen	Mouse myeloma cell line NS0-derived recombinant human OSM R β Glu28-Ser739 Accession # Q99650
Formulation	Lyophilized from a 0.2 μ m filtered solution in PBS with BSA as a carrier protein. See Certificate of Analysis for details.

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	0.1 μ g/mL	Recombinant Human OSM R β (Catalog # 4389-OR)

PREPARATION AND STORAGE

Reconstitution	Reconstitute at 0.2 mg/mL in sterile PBS.
Shipping	The product is shipped at ambient temperature. Upon receipt, store it immediately at the temperature recommended below.
Stability & Storage	<p>Use a manual defrost freezer and avoid repeated freeze-thaw cycles.</p> <ul style="list-style-type: none"> • 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.

BACKGROUND

OSM R β is a 150-180 kDa member of the IL-6 receptor family. It associates with gp130 to form the type II OSM receptor that is responsive to OSM. The gp130 subunit is shared by other IL-6 family cytokine receptors (1, 2, 3, 4), and OSM R β associates with gp130-like receptor (GPL) to form a receptor complex responsive to IL-31 (5, 6). The human OSM R β cDNA encodes a 979 amino acid (aa) precursor that includes a 27 aa signal sequence, a 712 aa extracellular domain (ECD), a 22 aa transmembrane segment, and a 218 aa cytoplasmic domain. The ECD contains one partial and one complete hematopoietin domain, an Ig-like domain, and three fibronectin type-III domains. The cytoplasmic domain contains box1, 2, and 3 motifs (7). Within the ECD, human OSM R β shares 55%, 58%, 61%, and 72% aa sequence identity with mouse, rat, bovine, and canine OSM R β , respectively. It also shares 31% aa sequence identity with human LIF R, but less than 20% aa sequence identity with human CNTF R α , G-CSF R, IL-6 R, IL-11 R α , and TCCR. OSM R β does not bind cytokines directly, but increases the affinity of gp130 for OSM, and GPL for IL-31 (7, 8). OSM R β , gp130, and GPL each initiate signaling events following ligand stimulation (9, 10). Jak/STAT and MAPK pathways are activated by OSM R β -containing receptors (9, 11, 12, 13), including STAT5b and SHC which are not activated by other IL-6 family receptors (10, 13). In mice, the loss of OSM R β expression blocks erythroid progenitor development in bone marrow, and dramatically reduces the number of circulating platelets and erythrocytes (14). The type II OSM receptor is the only IL-6 family receptor that promotes osteoblast differentiation in calvaria cell cultures (15).

References:

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