

**CERTIFICATE OF ANALYSIS – TECHNICAL DATA SHEET**

<b>Product name</b>	OSCAR, Mouse, clone 5B8		
<b>Catalog number</b>	HM1121-20UG		
<b>Lot number</b>	-	<b>Expiry date</b>	-
<b>Volume</b>	200 µl	<b>Amount</b>	20 µg
<b>Formulation</b>	0.2 µm filtered in PBS+0.1%BSA	<b>Concentration</b>	100 µg/ml
<b>Host Species</b>	Rat IgG2b	<b>Conjugate</b>	None
<b>Endotoxin</b>	<24 EU/mg	<b>Purification</b>	Protein G
<b>Storage</b>	4°C		

**Application notes**

	IHC-F	IHC-P	IF	FC	FS	IA	IP	W
Reference #				1,2	1			
Yes				•	•			
No								
N.D.	•	•	•			•	•	•

*N.D. = Not Determined; IHC = Immuno histochemistry; F = Frozen sections; P = Paraffin sections; IF = Immuno Fluorescence; FC = Flow Cytometry; FS = Functional Studies; IA = Immuno Assays; IP = Immuno Precipitation; W = Western blot*

Dilutions to be used depend on detection system applied. It is recommended that users test the reagent and determine their own optimal dilutions. The typical starting working dilution is 1:50.

**General Information**

**Description** The monoclonal antibody 5B8 reacts with mouse osteoclast-associated receptor (OSCAR), which is a 265 amino acid type 1 transmembrane protein belonging to the leukocyte receptor complex protein family that play critical roles in the regulation of both innate and adaptive immune responses. In mice, OSCAR is a RANKL-inducible gene which is expressed during the later stages of pre-osteoclast maturation and is shown to be a potent FcRγ-associated costimulatory receptor in vitro. OSCAR promotes osteoclastogenesis in vivo, and OSCAR binding to its collagen ligand led to signaling that is involved in functional differentiation of leukocytes. In recent studies human OSCAR has been shown to play multiple roles in the immune system including activation and maturation of immune cells, prevention of apoptosis and enhancement of pro-inflammatory circuits. The latter by inducing intracellular calcium release resulting in sustained IL-8 and chemokine expression leading to chemotaxis of Th2 effector and regulatory T-cells. In a murine model using calvarias bone explants, the synovial fluid of osteoarthritis patients resulted in increased OSCAR mRNA expression suggesting that OSCAR might contribute to in the degenerative process. Moreover, in a recent study OSCAR was found to be induced in monocytes of RA patients, facilitating their differentiation into osteoclasts and bone resorption. The monoclonal antibody, 5B8, can be used for analysis of mouse OSCAR in flow-cytometry as well as functional studies for osteoclastogenesis.

- References**
1. Koga, T et al; Costimulatory signals mediated by the ITAM motif cooperate with RANKL for bone homeostasis. *Nature* 2004, *428*: 758.
  2. Hara, H et al; Cell type-specific regulation of ITAM-mediated NF- $\kappa$ B activation by the adaptors, CARMA1 and CARD9. *J. Immunol* 2008, *181*: 918.

**Storage&stability** Product should be stored at 4°C. Under recommended storage conditions, product is stable for at least one year.

**Precautions** For research use only. Not for use in or on humans or animals or for diagnostics. It is the responsibility of the user to comply with all local/state and federal rules in the use of this product. Hycult Biotech is not responsible for any patent infringements that might result from the use or derivation of this product.

We hereby certify that the above-stated information is correct and that this product has been successfully tested by the Quality Control Department. This product was released for sale according to the existing specifications. This document has been produced electronically and is valid without a signature.

Approved by Manager of QC  
Brenda Teunissen

Date  
13/11/2020

Do you have any questions or comments regarding this product? Please contact us via [support@hycultbiotech.com](mailto:support@hycultbiotech.com).