Peninsula Laboratories, LLC

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Monoclonal Antibody To Rat CD172a

Anti Rat Signal Regulatory Protein (SIRP)

Monoclonal antibody OX-41 recognises rat CD172a (Signal Regulatory Protein, SIRP) which is selectively expressed by myeloid cells and neurons. It is a useful marker for characterising macrophage subpopulations of various tissues. In combination with other macrophage markers like monoclonal antibody OX-42 it allows a detailed phenotyping of specific macrophage subsets.

Product Number:	T-3002
Clone:	OX-41
Host species, isotype:	Mouse IgG2a
Quantity:	250µg
Format:	Affinity purified, liquid
	Supplied as 0.25ml solution. This stock solution contains 1mg/ml IgG, phosphate buffered saline pH 7.2 (PBS), 10mg/ml bovine serum albumin (BSA) as a stabilizer and 0.1% sodium azide as a preservative.
Stability:	Stock solution or aliquots thereof: 1 year at -20°C. Avoid repeated thawing and freezing.
Applications:	Tested for immunohistochemistry (IHC), has been described to work in FACS and Western Blots.
	Approximate working dilution for IHC: frozen sections: 5-20µg/ml (1:50 - 1:200) paraffin sections: 5-20µg/ml (1:50 - 1:200); Proteinase K pretreatment for antigen retrieval is recommended. Optimal dilutions should be determined by the end user.
	Suggested positive control: Rat skin
Immunogen:	Rat peritoneal macrophages.
Antigen, epitope:	CD 172a; OX-41 precipitates a surface antigen which migrates as a broad band (110-120kD) under reducing or non-reducing conditions. The epitope has not been further characterized.
Antigen distribution:	**Isolated cells:** Up to 80% of bronchial lavage cells and 90% of activated peritoneal cells are recognised by OX-41. Granulocytes and monocytes are also positive with OX-41.
	Tissue sections: OX-41 detects a wide range of macrophages in various tissues. It is especially suitable for the detection of follicular tingible body macrophages. In the brain a diffuse staining of brain tissue similar to Thy-1 marker was observed

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along with a distinct staining of glial cells. Only a few Kupffer cells are recognised by OX-41 in the liver. Side reactions with interstitial cells of the small intestine were reported. Such side reactions were absent in the kidney and heart.

Specificity:

Rat: granulocytes, monocytes macrophages.

Other: not tested.

Distribution of OX-41 and OX-42 antigens (Robinson et al. 1986, modified):

Tissues	OX-41	OX-42
Medulla of lymph node:		
Red pulp of spleen	++	++
Follicular TBM#	++	±
Splenic marginal zone	-	+
IDC** of spleen and lymph node	±	++
Liver:		
Kupffer cells	±	++
Brain:		
Glial cells	++	Microglia only
Kolmer cells	+	++
Skin:		
Langerhans cells	++	++
Dermis	+	++
Rejecting skin grafts	+	++
Kidney:		
Mesangial	±	±
Interstitial	-	+ <W3/25
Thymus:	+	+
Interstitial cells:		
of small intestine	+	+
of testis	±	±
of heart	-	+

++ Majority + Some ± Few - No macrophages or non-lymphoid cells appeared labelled.
# TBM, Tingible body macrophages** IDC, Interdigitating cells

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Selected references

ROBINSON, A.P. et al.: Macrophage heterogeneity in the rat as delineated by two monoclonal antibodies MRCOX-41 and MRCOX-42, the latter recognizing complement receptor type 3. Immunology: 57, 239-247 (1986).

For in vitro research only. Caution: this product contains sodium azide, a poisonous and hazardous substance.