

PRODUCT SPECIFICATIONS

Name	Anti-h PSA 8312 SPRN-5
Specificity	Antibody recognizes human prostate-specific antigen
Description	Monoclonal mouse antibody, cultured <i>in vitro</i> under conditions free from animal-derived components
Product code	100139
Product buffer solution	37 mM citrate, 125 mM phosphate, pH 6.0, 0.9 % NaCl, 0.095 % NaN ₃ as a preservative
Shelf life and storage	36 months from manufacturing at 2–8 °C
Analyte description	Prostate-specific antigen (PSA) is a protein produced by the cells of the prostate gland. PSA is present in small quantities in the serum of healthy men, and is often elevated in the presence of prostate cancer and in other prostate disorders. A blood test to measure PSA is considered the most effective test currently available for the early detection of prostate cancer, but this effectiveness has also been questioned.

PARAMETERS TESTED ON EACH LOT

Product appearance	Liquid, may turn slightly opaque during storage
Product concentration	5.0 mg/ml (+/- 10 %)
Immunoreactivity	80–120 % compared to the reference sample in an FIA test
IEF Profile	6.3 - 7.0
Purity	≥ 95 %

PARAMETERS DETERMINED DURING PRODUCT DEVELOPMENT

Subclass	IgG ₁
Association rate constant	Not determined (N/D)
Dissociation rate constant	N/D
Affinity constant	3 × 10 ⁹ l/mol
Determination method	SPR analysis (Biacore)
Determination antigen	PSA, Scripps (Cat P0725, Lot 2206902)

Legal disclaimer

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Cross-reactivities

PSA/ α 1-ACT complex 15 %
 Human-Kallikrein-2 no cross-reactivity
 PAP no cross-reactivity

Epitope

Residues 3-11, group 6a as described in Rye et al. (1999)

Pair recommendations

		DETECTION			
		8301	8311	8312	8313 (free PSA)
CAPTURE	8301	-	+	+	+
	8311	+	-	-	+
	8312	+	-	-	+
	8313 (free PSA)	+	+	+	-

Please note that pair recommendations are based on results obtained by our laboratory. Equally good results may be obtained using other pairs and therefore these recommendations are only indicative.

Product stability

TEMPERATURE, TIME	RESULT
-70 °C, 21 days	OK
-20 °C, 21 days	OK
+4 °C, 21 days	OK
+25 °C, 21 days	OK
+35 °C, 21 days	OK
+45 °C, 7 days	OK

Stability testing is performed in the product buffer to see whether different temperatures affect the antigen binding, charge or composition of the antibody. Please note that the shelf life given on the first page is based on real time stability testing at 2-8 °C in the product buffer.

Miscellaneous

Antibody recognizes native PSA antigen, Lee Biosolutions 497-11 and 497-17, and native PSA-ACT complex, Lee Biosolutions 498-11.

Clone 8312 reacts with non-reduced and reduced intact PSA as well as with reduced PSA fragments (Rye et al., 1999). In the same study affinities for free-PSA and PSA-ACT-complex were, 7.5×10^{-9} mol/l and 1.03×10^{-10} , respectively. They also noted that antibodies binding to epitope group 6 form a good pair with antibodies from groups 1 and 3. Clone 8312 cross-reacts with human kallikrein-2 (Rye, 1999a). Clone 8312 was coded as 5E4 in Rye et al. (1999).

References

Rye, P.D., Borner, O.P. and Paus, E. (guest editors) (1999), ISOBM TD-3 International Workshop on monoclonal antibodies against prostate-specific antigen. Tumor Biol., 20(suppl 1):1-94