

# Product specification

## Streptavidin-fluorescein RPN 1232

### Safety warnings and precautions

**Warning:** For research use only. Not recommended or intended for diagnosis of disease in humans or animals. Do not use internally or externally in humans or animals.

We recommend that this product and components are handled only by those persons who have been trained in laboratory techniques and that is used in accordance with the principles of good laboratory practice. As all chemicals should be considered as potentially hazardous, it is advisable when handling chemical reagents to wear suitable protective clothing, such as laboratory overalls, safety glasses and gloves. Care should be taken to avoid contact with skin or eyes. In case of contact with skin or eyes, wash immediately with water.

**Warning:** Contains sodium azide in dilute solution.

Dispose of waste by flushing with copious amounts of water to avoid the build up of explosive metallic azides in copper and lead plumbing. The total azide present in each pack is 0.5mg.

### Preparation

Streptavidin is prepared from the culture supernatant of *Streptomyces avidinii*. This protein has four high affinity binding sites for biotin and is very similar in this respect to the egg white protein, avidin. Streptavidin, however, unlike avidin, has an isoelectric point close to neutrality and contains no carbohydrate. These properties make streptavidin much less prone to non-specific binding.

Streptavidin-fluorescein is prepared using the isothiocyanate derivative of fluorescein. Excess labelling reagent is removed by gel filtration chromatography.

The fluorescently-labelled streptavidin has been rigorously tested in immunofluorescence staining of cells and cryostat sections of tissues to demonstrate the high signal-to-noise ratio that can be achieved with the biotin-streptavidin system.



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## Storage and stability

Store at 2-8°C in the dark. Avoid freeze-thaw cycles. Under these conditions the product is stable for twelve months.

## Packaging

Streptavidin-fluorescein is supplied in phosphate-buffered saline, pH7.5, containing 1%(w/v) bovine serum albumin and 0.05%(w/v) sodium azide (total volume 2ml) in a Duoseal vial, type P87.

## Use

Streptavidin-fluorescein can be used to detect biotinylated molecules, for example second antibody or protein A, in a variety of applications such as immunofluorescence staining and fluorescence-activated cell sorting. One 2ml pack is sufficient to stain approximately 2000-4000 slides when used at a recommended dilution of  $\frac{1}{100}$ , assuming 50-100 $\mu$ l per slide. The availability of both Texas Red<sup>TM</sup> and Fluorescein labelled streptavidin facilitates dual immunofluorescent staining as the emission maxima of the labels are clearly distinct.

Filters: Fluorescent compounds can be visualized using a fluorescence microscope with filters selected according to the light source and appropriate to the characteristics of the fluor. The relevant wavelengths are:

Fluor	Wavelength nm		Emitted colour
	Excitation	Emission	
Flourescein	490	525	Green
Texas Red	596	615	Orange-red

The suggested starting dilution for use of this product should be  $\frac{1}{100}$ , though this should be optimized by the user for the particular experimental requirements.



## Related products

Mouse Ig, biotinylated whole antibody (from sheep)	RPN 1001
Rat Ig, biotinylated whole antibody (from sheep)	RPN 1002
Human Ig, biotinylated whole antibody (from sheep)	RPN 1003
Rabbit Ig, biotinylated whole antibody (from donkey)	RPN 1004
Streptavidin alkaline phosphatase conjugate	RPN 1234
Streptavidin biotinylated horseradish peroxidase complex	RPN 1051
Streptavidin horseradish peroxidase conjugate	RPN 1231
Streptavidin Texas Red	RPN 1233
<sup>125</sup> I Streptavidin	IM 236
Mouse IgG, horseradish peroxidase linked whole antibody (from sheep)	NA 931
Rabbit IgG, horseradish peroxidase linked whole antibody (from donkey)	NA 934
Rat IgG, horseradish peroxidase linked whole antibody (from sheep)	NA 932
Human IgG, horseradish peroxidase linked whole antibody (from sheep)	NA 933
Mouse IgG, horseradish peroxidase linked F(Ab') <sub>2</sub> fragment (from sheep)	NA 9310
Rabbit IgG, horseradish peroxidase linked F(Ab') <sub>2</sub> fragment (from donkey)	NA 9340
Rat IgG, horseradish peroxidase linked F(Ab') <sub>2</sub> fragment (from sheep)	NA 9320

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