

FUJIFILM

Wako

Code No. 201-21271 (1 mL)

## Tamavidin<sup>TM</sup>2-REV, recombinant, Solution タマビジン<sup>TM</sup>2-REV, 組換え体, 溶液

Tamavidin<sup>TM</sup>2 is an avidin-like protein cloned from *Pleurotus cornucopiae*, a species of mushroom. By introducing a point mutation into the domain of Tamavidin<sup>TM</sup>2 involved in binding to biotin, a new protein was created that can reversibly bind to biotin. This protein was named Tamavidin<sup>TM</sup>2-REV.

### 【Features】

- Able to reversibly bind to biotin  
: The biotinylated factor can be recovered from Tamavidin<sup>TM</sup>2-REV by adding excess biotin.
- Near-neutral isoelectric point (pI)  
: Non-specific binding due to charge is prevented.
- Protease-resistant  
: It can be treated with protease after it has bound the biotinylated factor.

### 【Source】

*E. coli* expressed mushroom (*Pleurotus cornucopiae*) Tamavidin<sup>TM</sup>2-REV.

### 【Product concentration】

Approximately 1 mg/mL

### 【Formulation】

20 mmol/L potassium phosphate buffer (pH 7.0)

### 【Storage conditions】

Store at -20°C.

### 【Molecular weight】

Approximately 60 k (SDS-PAGE) (tetramer)

### 【Isoelectric point (pI)】

Approximately 7.2

### 【Thermal stability】

T<sub>m</sub> = Approximately 80°C

### 【An example of usage】 [Recovery of biotinylated factor]

Immobilize Tamavidin<sup>TM</sup>2-REV on the bead carrier (e.g., agarose, magnetic beads)

↓  
Mix it with the biotinylated factor and react  
↓

Remove the supernatant by centrifugation  
or using a magnetic stand  
↓ Add washing buffer  
↓ Mix  
Remove the supernatant by centrifugation  
or using a magnetic stand  
↓ Add biotin solution\* as an elution buffer  
↓ Mix  
Recover the supernatant as a purified fraction by centrifugation  
or using a magnetic stand

} Repeat multiple times

\* Examples of how to prepare biotin solution as an elution buffer

- 2 mmol/L biotin solution  
Use PBS to make a biotin concentration of 2 mmol/L.
- 20 mmol/L biotin solution  
Use 50 mmol/L potassium phosphate buffer (pH 7.0) to make a biotin concentration of 20 mmol/L.

### 【References】

- 1) Takakura, Y. *et al.*, "Tamavidin 2-REV : An engineered tamavidin with reversible biotin-binding capability.", *J. Biotechnol.*, **164**(1), 19-25 (2013).
- 2) Motani, K. *et al.*, "BioID screening of biotinylation sites using the avidin-like protein Tamavidin 2-REV identifies global interactors of stimulator of interferon genes (STING).", *J. Biol. Chem.*, **295**(32), 11174-11183 (2020).

### 【Package】

1 mL

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