



## Anti-Tyrosyl-tRNA synthetase autoantibodies (Ha)

### Synonyms

anti-Ha

### Indications

- ▶ Dermatomyositis
- ▶ Polymyositis
- ▶ PM/DM-overlap syndromes with other connective tissue diseases
- ▶ Antisynthetase syndrome
- ▶ Interstitial lung disease
- ▶ Raynaud's phenomenon (active stage, before starting therapy)

### see also

- ▶ [Autoantibodies in idiopathic inflammatory myopathies](#)

### Antigens

The tyrosyl-tRNA synthetase (EC 6.1.1.1;  $M_r$  59,1 kDa; chromosome 1p35.1; YARS, YRS) belongs to the family of aminoacyl tRNA synthetases, which catalyze the ester bond of amino acids to their specific transport RNA (tRNA). The latter ones are engaged in the transport of amino acids for their assembly into the nascent polypeptide chain within the ribosomes.

### Autoantibodies

The autoantibodies have been found hitherto in a patient with DM/PM an antisynthetase syndrome (Hashish et al. 2005). Obviously they reacted against the catalytic site of the synthetase and inhibited its enzymatic activity *in vitro*. Since this antibody has been seen only in one single patient, suggestions with regard to its prevalence in myositis patients in general and to its diagnostic sensitivity and specificity cannot be made at the moment. Antibody of this antigen specificity likely belong to the group of rare anti-synthetases.

As far as the synonym Ha (Hamaguchi et al. 2013) is concerned, its provenience is unknown, it might be, that it has been named according to the initials of the first author.

### Literature

Hamaguchi Y, Fujimoto M, Matsushita T, Kaji K, Komura K, Hasegawa M, Kodera M, Muroi E, Fujikawa K, Seishima M, Yamada H, Yamada R, Sato S, Takehara K, Kuwana M: Common and distinct clinical features in adult patients with anti-aminoacyl-tRNA synthetase antibodies: heterogeneity within the syndrome. *PLoS One* (2013); 8(4): e60442 (PMID: [23573256](#)).

Hashish L, Trieu EP, Sadanandan P, Targoff IN: Identification of autoantibodies to tyrosyl-tRNA synthetase in dermatomyositis with features consistent with antisynthetase syndrome. *Arthritis Rheum* (2005): 52: Suppl 9: S312.