

February 26, 2014

STATEMENT ON A NONPROPRIETARY NAME ADOPTED BY THE USAN COUNCIL

USAN (BC-50)

THROMBOMODULIN ALFA

PRONUNCIATION

throm" boe mod' ue lin al' fa

THERAPEUTIC CLAIM

Anti-thrombotic, (anti-coagulant) Anti-inflammatory

CHEMICAL NAME

1-498-Thrombomodulin (human clone TMP26/TMJ1 protein moiety reduced)

STRUCTURAL FORMULA

498 amino acid sequence of thrombomodulin alfa

APAEPQPGGS	QCVEHDCFAL	YPGPATFLNA	SQICDGLRGH	LMTVRSSVAA	50
DVISLLLNGD	GGVGRRLWI	GLQLPPGCGD	PKRLGPLRGF	QWVTGDNNTS	100
YSRWARLDLN	GAPLCGPLCV	AVSAAEATVP	SEPIWEEQQC	EVKADGFLCE	150
FHFPATCRPL	AVEPGAAAAA	VSITYGTPFA	ARGADFQALP	VGSSAAVAPL	200
GLQLMCTAPP	GAVQGHWARE	APGAWDCSVE	NGGCEHACNA	IPGAPRCQCP	250
AGAALQADGR	SCTASATQSC	NDLCEHFCVP	NPDQPGSYSC	MCETGYRLAA	300
DQHRCEDVDD	CILEPSPCPQ	RCVNTQGGFE	CHCYPNYDLV	DGECVEPVDP	350
CFRANCEYQC	QPLNQTSYLC	VCAEGFAPIP	HEPHRCQMFC	NQTACPADC	400
PNTQASCECP	EGYILDDGFI	CTDIDECENG	GFCSGVCHNL	PGTFECICGP	450
DSALVRHIGT	DCDSGKVDGG	DSGSGEPPPS	PTPGSTLTPP	AVGLVHSG	498

In the variable with 500 amino acid residues, two amino acids, phenylalanine and proline ("FP" in the single letter code), derived from signal sequence, are attached to the N-terminal of the above sequence.

Disulfide bridges

The results show that a total of 46 cysteine residues form the following 23 pairs of disulfide bonds (Numbers of the amino acid residues correspond to amino acid numbers from N-terminus):

Cys ¹² —Cys ¹⁷	Cys ³⁴ —Cys ¹⁴⁹	Cys ⁷⁸ —Cys ¹¹⁵	Cys ¹¹⁹ —Cys ¹⁴⁰	Cys ¹⁵⁷ —Cys ²⁰⁶
Cys ²²⁷ —Cys ²³⁸	Cys ²³⁴ —Cys ²⁴⁷	Cys ²⁴⁹ —Cys ²⁶²	Cys ²⁷⁰ —Cys ²⁷⁸	Cys ²⁷⁴ —Cys ²⁹⁰
Cys ²⁹² —Cys ³⁰⁵	Cys ³¹¹ —Cys ³²²	Cys ³¹⁸ —Cys ³³¹	Cys ³³³ —Cys ³⁴⁴	Cys ³⁵¹ —Cys ³⁶⁰
Cys ³⁵⁶ —Cys ³⁷⁰	Cys ³⁷² —Cys ³⁸⁶	Cys ³⁹⁰ —Cys ³⁹⁵	Cys ³⁹⁹ —Cys ⁴⁰⁷	Cys ⁴⁰⁹ —Cys ⁴²¹
Cys ⁴²⁷ —Cys ⁴³⁷	Cys ⁴³³ —Cys ⁴⁴⁶	Cys ⁴⁴⁸ —Cys ⁴⁶²		

MOLECULAR FORMULA

C₂₂₃₀H₃₃₅₇N₆₃₃O₇₁₈S₅₀

MOLECULAR WEIGHT	64,000 Da glycosylated form 52,125 Da non-glycosylated form
TRADEMARK	Recomodulin™ (Japan only)
SPONSOR	Asahi Kasei Pharma America Corporation
CODE DESIGNATIONS	ART-123
<u>CAS</u> REGISTRY NUMBER	120313-91-9
UNII	2VU8WT49WX
WHO NUMBER	8306
SCS	