

Human Myelin Basic Protein Isoypes

21.5kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFGGDRGAPKRGSGKV	60
20.2kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFGGDRGAPKRGSGKV	60
18.5kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFGGDRGAPKRGSG--	58
17.2kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFGGDRGAPKRGSG--	58

21.5kDa	PWLKPGRSPLPSHARSQPGLCNMYKDSHHPARTAHYGSLPQKSHGRTQDENPVVHFFKNI	120
20.2kDa	PWLKPGRSPLPSHARSQPGLCNMYKDSHHPARTAHYGSLPQKSHGRTQDENPVVHFFKNI	120
18.5kDa	-----KDSHHPARTAHYGSLPQKSHGRTQDENPVVHFFKNI	94
17.2kDa	-----KDSHHPARTAHYGSLPQKSHGRTQDENPVVHFFKNI	94

21.5kDa	VTPTTPPPSQGKGRGLSLSRFSWGAEQORPGFGYGGRASDYKSAHKGFKGVDAQGTLSKI	180
20.2kDa	VTPTTPPPSQGK-----AEGORPGFGYGGRASDYKSAHKGFKGVDAQGTLSKI	169
18.5kDa	VTPTTPPPSQGKGRGLSLSRFSWGAEQORPGFGYGGRASDYKSAHKGFKGVDAQGTLSKI	154
17.2kDa	VTPTTPPPSQGK-----AEGORPGFGYGGRASDYKSAHKGFKGVDAQGTLSKI	143

21.5kDa	EKLGGRDSRSGSPMARR	197
20.2kDa	EKLGGRDSRSGSPMARR	186
18.5kDa	EKLGGRDSRSGSPMARR	171
17.2kDa	EKLGGRDSRSGSPMARR	160

Rat Myelin Basic Protein Isoypes

21.5kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFSGDRGAPKRGSGKV	60
18.5kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFSGDRGAPKRGSG--	58
17kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFSGDRGAPKRGSGKV	60
14kDa	MASQKRPSQRHGSKYLATASTMDHARHGFLPRHRDTGILDSTIGRFFSGDRGAPKRGSG--	58

21.5kDa	PWLKQSRSPPLPSHARSRPGLCHMYKDSHTRTTHYGSLPQKSORTQDENPVVHFFKNIVTP	120
18.5kDa	-----KDSHTRTTHYGSLPQKSORTQDENPVVHFFKNIVTP	94
17kDa	PWLKQSRSPPLPSHARSRPGLCHMYKDSHTRTTHYGSLPQKSORTQDENPVVHFFKNIVTP	120
14kDa	-----KDSHTRTTHYGSLPQKSORTQDENPVVHFFKNIVTP	94

21.5kDa	RTPPPSQGKGRGLSLSRFSWGAEQKPGFGYGGRASDYKSAHKGFKGGAYDAQGTLSKIEK	180
18.5kDa	RTPPPSQGKGRGLSLSRFSWGAEQKPGFGYGGRASDYKSAHKGFKGGAYDAQGTLSKIEK	154
17kDa	RTPPPSQGKGRGLSLSRFSWG-----	141
14kDa	RTPPPSQGKGRGLSLSRFSWG-----	115

21.5kDa	LGGRDSRSGSPMARR	195
18.5kDa	LGGRDSRSGSPMARR	169
17kDa	--GRDSRSGSPMARR	154
14kDa	--GRDSRSGSPMARR	128

In both human and rat there are four alternate transcripts from one gene, resulting from the inclusion or exclusion of two exons. Charged amino acids are hatched and large hydrophobic amino acids are blocked out. Myelin basic proteins are heavily post-translationally modified by serine and threonine phosphorylation and several arginine residues are modified to form citrulline.