

## Fluorescent proteins and epitopes for EnCor antibodies

	←-MCA1F1, MCA3B11-GFP->	
Clontech-AcGFP	MVSKGAE----LFTGVVPILV	55
Tsien-eGFP	MVSKGEE----LFTGVVPIVLELD	55
Native GFP	-MSKGEV----LFTGVVPIVLELD	54
Clontech-Cherry	MVSKGEEDNMAIIKCFMRFKVMH	60
mApple	MVSKGEENMAIIKCFMRFKVMH	60
Venus	MVSKGEE----LFTGVVPIVLELD	
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	Fluorochrome Peptide	
Clontech-AcGFP	VFWPTLVTTLSYVQCFSRYPDHMKQ	115
Tsien-eGFP	VFWPTLVTTLYVQCFSRYPDHMKQ	115
Native GFP	VFWPTLVTTLSYVQCFSRYPDHMKQ	114
Clontech-Cherry	FAWDILLSPOFMYGSKAYVVKHPADIP	118
mApple	FAWDILLSPOFMYGSKAVYVKHPADIP	118
Venus	VFWPTLVTTLYVQCFSRYPDHMKQ	
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	←-MCA-5A6-	
Clontech-AcGFP	EGDILVNRIFELTGDEKEDGNLLGNKMEYNYNAHNVYIMDKAKNGIKVNEKIRHNI	175
Tsien-eGFP	EGDILVNRIFELKGIIDEKEDGNLLGHKLEYNYNSHNVYIMADKQKNGIKVNEKIRHNI	175
Native GFP	EGDILVNRIFELKGIIDEKEDGNLLGHKLEYNYNSHNVYIMADKQKNGIKVNEKIRHNI	174
Clontech-Cherry	QDGEFIYKVKLRGTNEPSDGPVMOKKIMG-WEASSEFMYPED--GALKGELKQRILKDKG	175
mApple	QDGVFIYKVKLRGTNEPSDGPVMOKKIMG-WEASSEFMYPED--GALKSEIKKRIKDKG	175
Venus	EGDILVNRIFELKGIIDEKEDGNLLGHKLEYNYNSHNVYITADKQKNGIKANEKIRHNI	
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	--mCherry-->	
Clontech-AcGFP	SVQLADHYQQNTPIGDGPVLLPNDHYLSTQSALSKEPNEKRDHMYVLEFVTAAGITHGM	235
Tsien-eGFP	SVQLADHYQQNTPIGDGPVLLPNDHYLSTQSALSKEPNEKRDHMYVLEFVTAAGITHGM	235
Native GFP	SVQLADHYQQNTPIGDGPVLLPNDHYLSTQSALSKEPNEKRDHMYVLEFVTAAGITHGM	234
Clontech-Cherry	--GHYQAEVKITTYKAKKPVQLPGAYNVNLIKLDITS-HNEDYTIIVEQYERAEGRHSTGGMD	232
mApple	--GHYAAEVKITTYKAKKPVQLPGAYIVDIKLDIVS-HNEDYTIIVEQYERAEGRHSTGGMD	232
Venus	GVQLADHYQQNTPIGDGPVLLPNDHYLSYQSKLSKEPNEKRDHMYVLEFVTAAGITHGM	
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Clontech-AcGFP	ELYK-	239
Tsien-eGFP	ELYK-	239
Native GFP	ELYK-	238
Clontech-Cherry	ELYK-	236
mApple	ELYK-	236
Venus	ELYK-	
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The mouse monoclonal antibodies **MCA-1F1** and **MCA-3B11** were raised against recombinant AcGFP and bind to the N-terminal peptide of this molecule. The AcGFP protein is 94% identical in amino acid sequence to eGFP, a widely used engineered version of native GFP developed in the Tsien lab, and both **MCA-1F1** and **MCA-3B11** bind to the N-terminus of eGFP. They do not recognize mCherry as expected from the above sequence data. The two antibodies are of different isotypes which may be useful for some applications. The **MCA-5A6** and **MCA-5B1** antibodies were raised against recombinant mCherry and have distinct epitopes as shown and show no cross-reactivity with GFP, though we can predict that they will recognize the mCherry derivative mApple. Currently we market **MCA-5A6** and the antibody **MCA-5B1** can be obtained by special order. EnCor currently markets another mouse monoclonal to mCherry, **MCA-1C51**, the epitope for which is at present unknown.