

MICAL1_MOUSE $\alpha 1$ $\alpha 2$ $\alpha 3$ $\alpha 4$ $\beta 1$ $\alpha 5$

1 10 20 30 40 50 60 70 80 90 100

MICAL1_MOUSE .MASPASTNPAHDHFTPTFVAQLCQDVVSSFGGLCRALGVESGGGLDSCWKTKAQLNYSWAKSLWALDERRASQPVYQGGQA CTNKKCLVVGAGPCGLRAVELAILLGA
MICAL1_HUMAN .MASPSTTNPAAAHFESFLQALCQDVVSSFGGLCGALGLGEPGGGLDLPQHKIKDQLNYSWAKSLWALDERRAGQPVYQGGRACTSTKCLVVGAGPCGLRAVELAILLGA
MICAL2_MOUSE MGENEDFKQAQAGQVFNPFVQATTCCKGTLQAFNLTCLLDLPLDHHNFFSQLSKLSKVTTWRKALWVALDERRGSHKDYRKGKACTMTCGLVGGGPCGLRAIELAYLGA
MICAL2_HUMAN MGENEDFKQAQAGQVFNPFVQATTCCKGTLQAFNLTTRHLDLPLDHHNFFSKLKSQVTTWRKALWVALDERRGSHKDYRKGKACTMTCGLVGGGPCGLRAIELAYLGA
MICAL3_MOUSE MBERKQETTPNAHVLPDRFVQATTCCKGTLRAFQELCDHLELKKPKDHYSEYHKLKSQVTTWRKALWVALDERRGSHKDYRKGKACTMTCGLVGGGPCGLRAIELAYLGA
MICAL3_HUMAN MBERKQETTPNAHVLPDRFVQATTCCKGTLRAFQELCDHLELKKPKDHYSEYHKLKSQVTTWRKALWVALDERRGSHKDYRKGKACTMTCGLVGGGPCGLRAIELAYLGA
MICAL_DROME .MAEHA AAAEAELEPDLLCVATTMROTLALHRAAMCEAVGLRPSPLNDFEWRPLKAKVRSWRKALWVALDERRAAHRVYGRGAACCTCTRVLVVGGGPCGLRAIEAQLLGA

MICAL1_MOUSE $\beta 2$ $\beta 3$ $\alpha 6$ $\alpha 7$ $\beta 4$ $\alpha 8$ $\beta 5$ $\beta 6$ $\beta 7$ $\alpha 9$ $\beta 8$

110 120 130 140 150 160 170 180 190 200 210

MICAL1_MOUSE RVVLEVKRIRKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHWGKFTFGLQPPPRKGS...GWRAOLQPNPPAQLASVYEFQDVL
MICAL1_HUMAN RVVLEVKRIRKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHWGKFTFGLQPPPRKGS...GWRAOLQPNPPAQLASVYEFQDVL
MICAL2_MOUSE RVVVVEKRIKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHNVEFPFVRLVLEPPPEQDQNGKRWRAEFIPADHA LSFDFEFDVL
MICAL2_HUMAN RVVVVEKRIKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHNVEFPFVRLVLEPPPEQDQNGKRWRAEFIPADHA LSFDFEFDVL
MICAL3_MOUSE RVVVLEKRIKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHNVEFPFVRLVLEPPPEQDQNGKRWRAEFIPADHA LSFDFEFDVL
MICAL3_HUMAN RVVVLEKRIKFSRHNVLHLWPFPIIDLRALGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHNVEFPFVRLVLEPPPEQDQNGKRWRAEFIPADHA LSFDFEFDVL
MICAL_DROME RVVVLEKRIKFSRHNVLHLWPFPIIDLRNLGAKKFFYGRFCGTLIDHSIRQLQLLLEKVALLGVESHVHNVEFPFVRLVLEPPPEQDQNGKRWRAEFIPADHA LSFDFEFDVL

MICAL1_MOUSE $\beta 9$ $\beta 10$ $\alpha 10$ $\beta 11$ $\alpha 11$ $\beta 12$ $\beta 13$ $\alpha 12$ $\alpha 13$

220 230 240 250 260 270 280 290 300 310 320

MICAL1_MOUSE ISAAGGKFPVEGFTIREMRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL1_HUMAN ISAAGGKFPVEGKVRBMRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL2_MOUSE IGADGRNRTLEGFRKRFRRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL2_HUMAN IGADGRNRTLEGFRKRFRRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL3_MOUSE IGADGRNRTLEGFRKRFRRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL3_HUMAN IGADGRNRTLEGFRKRFRRGKLAIGITANFNNGRTVETQVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN
MICAL_DROME IGADGRNMLDIFRRKRFRRGKLAIGITANFNNGKTEARVPEISGVARVYNOKFPFQSLKKAETGIDLNIIVYYKDCIHYFVMTAKKQCLRLRIGVLRQDLSLSDTDLGKAN

MICAL1_MOUSE $\alpha 14$ $\beta 14$ $\beta 15$ $\beta 16$ $\beta 17$ $\alpha 15$

330 340 350 360 370 380 390 400 410 420 430

MICAL1_MOUSE VVPEALQRFFARAAADPNTKHLGKLEFAQDAHGRQDVVAADFDTSMRRAS SARVQKHGKARLLGLVGDCLVPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL1_HUMAN VVPEALQRFFARAAADPNTKHLGKLEFAQDAHGRQDVVAADFDTSMRRAS SARVQKHGKARLLGLVGDCLVPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL2_MOUSE VVQDNLVYARAAADPNTKHLGKLEFAINHGGRQDVVAADFDTSMYASNAALMRERRQHQGLVVALVGDGSLPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL2_HUMAN VVQDNLVYARAAADPNTKHLGKLEFAINHGGRQDVVAADFDTSMYASNAALVRERRQHQGLVVALVGDGSLPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL3_MOUSE VVQDNLVYARAAADPNTKHLGKLEFAINHYGGRQDVVAADFDTSMYASNAALVRERRQHQGLVVALVGDGSLPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL3_HUMAN VVQDNLVYARAAADPNTKHLGKLEFAINHYGGRQDVVAADFDTSMYASNAALVRERRQHQGLVVALVGDGSLPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL
MICAL_DROME VVDTQKLDVYARAAADPNTKHLGKLEFAVNNHYGGRQDVVAADFDTSMFAASMSCRVIVRKHGKARLLGLVGDGSLPEFPWFPGCVARGPLAAMDANMVKRRAEGLRGPEVL

MICAL1_MOUSE $\alpha 16$ $\eta 4$ $\eta 5$ $\eta 6$ $\beta 18$

440 450 460 470 480

MICAL1_MOUSE ABRESVQLLSQSPENMHRNVAQGLDPAATRYPNLNLRAVTFPNQVLDVDMMDKEL
MICAL1_HUMAN ABRESVQLLSQSPENMHRNVAQGLDPAATRYPNLNLRAVTFPNQVLDVDMMDKEL
MICAL2_MOUSE ABRESVQLLSQSPENINKNFEQTLDPATRYPNLNLHCVRFPHQVRELVITIKEMD
MICAL2_HUMAN ABRESVQLLSQSPENINKNFEQTLDPATRYPNLNLHCVRFPHQVRELVITIKEMD
MICAL3_MOUSE ABRESVQLLSQSPENVSKNFSQSIDPVTTRYPNLNLNPLRPSQVRELVDTGSGE
MICAL3_HUMAN ABRESVQLLSQSPENVSKNFSQSIDPVTTRYPNLNLNPLRPSQVRELVDTGSGE
MICAL_DROME AQRESVQLLSQSPENVSKNFSQSIDPVTTRYPNLNLNPLRPSQVRELVDTGSGE