

Arabidopsis phyllosphere microbial rhodopsin sequences

D or **E** mark the proton donor and acceptor sites

L mark position 105

>FQH108Y01DYSRF_10 [264 - 1] (REVERSE SENSE)
IALGYPGELATDTGTRLVWGTLSSTIPFLYLLYVLFVELSKSLDRQPPEVRGTVSRLRIML
VGLWGVYPVAYLFPVFGFDGANAFVLRQ

>FQH108Y01D7NVA_13 [246 - 1] (REVERSE SENSE)
EIPMDIITPFQFSLVYNAFSFTFATMAAATAFLWLSRSQVAPAYRTAVTISGLVTAIAAY
HYLRIFESWNAAYTLKDGVIAA

>FQH108Y01A0V6P_5 [1 - 240]
SGLGKSIAQQPANARNLVRKARLLTFASWGFYPIVYMAPYAGLTGGTVTTTTIQIGYTIAD
IVAKAGLGVLI FLI AVRKSE

>FQH108Y02G5HBL_3 [1 - 234]
VAPAYRTALTISGLVTGIAAYHYRIFESWIAAAYSFGNGVVTATPFVAFNDAYRYV**D**WLLT
VPL**L**L**I****E**LVLVMRLSREE

>FQH108Y02JDRIQ_6 [3 - 260]
AAVHYFYMRGVWLETKTSPTREFRYID**D**WTTLTVPL**L**MCV**E**FYLLIKPYGGKTSTLWRLVGYSV
FMLVTGYIGESIDPARTVIWGAISTL

>FQH108Y02GFBUB_11 [246 - 1] (REVERSE SENSE)
LTQAASRLLLVRLVPAAALMIVLGYPGEITLETGPRVLWGVLSTVPPFLFLLYVLFVELTR
ALEGKSAQVRAQISNLRWILLA

>FQH108Y02GDU9V_12 [261 - 1] (REVERSE SENSE)
LVAWGLVSTVFYGYLYVALIGAVRASMPMTMGREAAVSLRNATIVLLGSGVYPLVYSVPV
FLDVTPAWFAGMQVAYSAADVLAKVGF

>FR5BLMY01A3LNE_19 [279 - 1] (REVERSE SENSE)
KPYGGKTSTLWRLVGYSVFMLVTGYIGESIDPARTVIWGAISTLGYIGIVYEATLGSVKQ
VADQSPNPEVSKAVRLLRNFLVIGWGIYPIGYM

>FR5BLMY01A2SOV_13 [261 - 1] (REVERSE SENSE)
SQRQVARQYRNAVIVSATVCAIAAYHYFRIFNNFEDSYPPGETIDSAHQLSNIEFNEGYR
YV**D**WFLTVPL**L**L**E**TVAVLALGRAASK

>FR5BLMY01EEKQC_16 [271 - 113] (REVERSE SENSE)
PGLLGGMGLNLDLIYNIGDAVNKIGFGLVVYGAAVASTKHESVASKLVSANV

>FR5BLMY01B6MSK_5 [1 - 246]
YNAFSFTFATMAAATAFLWLSRSQVAPAYRTAVTISGLVTAIAAYHYLRIFESWNAAYTL
KDGVI AATGFVAFNDAYRYV**D**WL

>FR5BLMY01DVX3N_7 [2 - 157]
GGLLGGMGLNLDLIYNIGDAVNKIGFGLVVYGAAVASTKHESVASKLVSANV

>FR5BLMY01D1Q71_1 [3 - 188]
SRSEVGPRYPVAVLAGVCIAGVAALSAYLVVKWDSGFRLDGDVYVPGEEARF'TLAGRYM
DW

>FR5BLMY01CCOG4_8 [235 - 68] (REVERSE SENSE)
PAYRTALTISGLVTGIAAYHYRIFESWIAAAYSFGNASSRRRRSRSTMRIAMSTGC

>FR5BLMY01A6HUY_8 [242 - 3] (REVERSE SENSE)
PAEKL PDDVDERDRRQRPPQRTGRNIGRDLAGIAQHDHQRRGRSEPDRLRRRLFRRQPHH
EHQLDQQERHGQQPVDAIG

>FR5BLMY02H49KV_4 [3 - 248]
GKKTQPSGHHTLLHASVPFIAATAYLAMAFGIGTLVNSDGSATYLARYV**D**WSVTTPI**L**LS

GLVLLAFHEHGKTGEVGGYLTS

>FR5BLMY02HP23R_2 [2 - 235]

SVIVLDVLMIVTGLISSLAAPSLAKWIWYGWSCVAFLGVLYLLWGPLRSQAVNRGAALGA
AYAKNLIFLTVIWFLYPI

>FR5BLMY02G0OH7_11 [246 - 1] (REVERSE SENSE)

RALWGTLSSIPFVYIVWELFRGLGESIEQQPAAARDLVRRARLLTFASWGFYPIVYMAPY
AGLTGANVTTVIQLGYTIADIV

>FR5BLMY02IVMZB_4 [1 - 222]

MYFGAMADAVRKSSRP IRLGYFWIRLIMTIGWAIYPILHFVDVIGSGHVASIVVLYSVA
DLVNLI AISLIVLA

>FR5BLMY02G7D59_4 [1 - 252]

RGEIATDIPTRALWGTLSSIPFVYIVWELFRGLGASIDQQPVAARGLIRKARLLTFASWG
FYPIVYMAPYAGLTGANATTVIQI