

**Table 2**  
*GTP hydrolysis, dipeptide formation and translocation times for wild-type, SmP and SmD ribosomes*

Ribosome		$\tau_{\text{GTP}}$ (ms)	$\tau_{\text{dip}}^\dagger$ (ms)	$\tau_{\text{trans}}^\ddagger$ (ms)	$\tau_{\text{dip}} + \tau_{\text{trans}}$ (ms)	Calculated $k_{\text{cat}}^\S$ ( $\text{s}^{-1}$ )
Wild-type	-Sm	10	30	22	52	19.2
	+Sm	9.1	58	109	167	6.0
SmP	-Sm	24	56	27.5	83.5	12.0
	+Sm	7.1	64	35.5	99.5	10.0
SmD	-Sm	158	190	19	209	4.8
	+Sm	50	83	24	107	9.3

$^\dagger$  See Figure 1, legend.

$^\ddagger$  From Bilgin *et al.* (1988) (-Sm); from N. Bilgin (unpublished) (+Sm).

$^\S$   $k_{\text{cat}}$  is calculated as:  $k_{\text{cat}} = 1/(\tau_{\text{dip}} + \tau_{\text{trans}})$ . Compare with measured  $k_{\text{cat}}$  values in Table 3.